CREATING HEALTHY LANDSCAPES, CREATING HEALTHY CHILDREN:

A DESIGN FOR EASTWYCK VILLAGE

by

SHANNON BAZAR ZAHRN

(Under the Direction of Marianne Cramer)

ABSTRACT

Eastwyck Village, a townhouse cooperative in urban Decatur, Georgia, is examined for potential play locations for children. Theories on child development are reviewed and developmental needs are addressed for children ages 2 to 13. Children's play and play spaces from colonial times to today are also introduced. Washington Elementary Environmental Yard and Oakhurst Community Garden demonstrate successful children spaces and are used as case studies for design suggestions at Eastwyck Village.

INDEX WORDS: Eastwyck Village, Decatur, Georgia, children, playgrounds, child development, Playground Movement, Washington Elementary Environmental Yard, Oakhurst Community Garden Project

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SHANNON BAZAR ZAHRN

B.A., Sweet Briar College, 1999

A Thesis Submitted to the Graduate Faculty of The University of Georgia in Partial Fulfillment

of the Requirements for the Degree

MASTER OF LANDSCAPE ARCHITECTURE

ATHENS, GEORGIA

2005

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Major Professor:	Marianne Cramer
Committee:	Maryanne Akers David Berle Matt Forshee

Electronic Version Approved:

Maureen Grasso
Dean of the Graduate School
The University of Georgia
December 2005

DEDICATION

To Catherine for your support through every step of this dance.

ACKNOWLEDGEMENTS

With much gratitude, I would like to thank my wife, Catherine, for her support, patience, and love during the course of writing this thesis. I thank her for her sacrifices throughout this process. I would also like to thank Gracie for her faithful encouragement and early morning meetings. Many thanks to Heather McLeod for her professional assistance and enduring friendship. I would like to thank Marianne Cramer for her guidance and insight throughout this process. Working with her has been a significant learning experience. Sincere appreciation goes out to my reading committee for their valuable time and advice. Lastly, I would like to thank my family and friends for their encouragement and faith in me.

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CHAPTER 1

INTRODUCTION

Throughout time, societal values have changed and influenced the design of play environments for children. Playground designers have responded to these values and have created spaces that vary so dramatically that they seem to be on opposite ends of the spectrum. In an attempt to create safe and healthy playscapes for children, designs have ranged from controlled, supervised, and highly designed spaces to boundless "junkyards." Recently, however, playgrounds have taken a backseat to technology, and children are feeling the effects. One out of four children in the United States between the age of five and eighteen is obese. Studies show that there is a strong association between obesity and the number of hours spent watching television or using the computer. Children that sit in front of the television or computer for more than five hours a day may fall into the category of extremely obese (Lair, par.2). According to the United States Department of Health and Human Services, the most immediate consequence of child obesity is social discrimination. Poor self-esteem and depression often follow. As cities continue to grow diminishing open green space, parents will soon realize the need to put activity back into their children's lives and playgrounds will again become an outlet for health.

Chapter 2 introduces Eastwyck Village, a community in Decatur, Georgia, where the process of community renovations has residents calling for improvements in their children's play spaces. Eastwyck Village was chosen for its large population of children and its urban location.

Existing features including current play spaces are examined in chapter 3. Through inventory and analysis, a composite analysis is created.

Creating beneficial spaces for children necessitates an investigation into the developmental aspect of a child's life. Understanding that playscapes have the ability to influence a child's intellectual, physical, social, and emotional development, chapter 4 introduces this multifaceted topic and presents an inventory of the developmental stages from infancy to early adolescence, including developmentally appropriate activities and skills. Chapter 5 concentrates on the playground movement, why and how it began, and where change has brought playground construction. Children's play from colonial times to today is highlighted as testament to a child's unbreakable spirit and ability to find play wherever she may be. Chapter 6 examines two case studies, Washington Elementary Environmental Yard and Oakhurst Community Garden Project. Both projects are successful examples of children's play spaces.

Children are natural explorers. Given the opportunity, they will investigate, discover, and create. Providing built playgrounds in communities is the first step. Built playgrounds with swings, slides, and climbing structures are predictable and familiar to children. They offer children a place to build their confidence socially and physically. As children become comfortable with the challenges offered at built playgrounds, they begin to find ways to meet their developmental needs. The next step toward providing for the needs of children is to consider what happens when children's development causes them to search for adventure beyond the playground. With this in mind, I suggest that Eastwyck Village establish a diverse environment throughout their community, one that stimulates learning, socialization, motor development, and imaginative play. Design elements based on the research from chapters 2 through 6 are applied to design suggestions in chapter 7.

CHAPTER 2

EASTWYCK VILLAGE
DECATUR, GEORGIA

AREA OVERVIEW

Long before Georgia's first colonizer, Lucas Vásquez de Ayllón, established the first colony of Europeans and Africans in Georgia in 1526, Creek and Cherokee Indians made Georgia their home (DeVorsey, par. 4). These Georgia natives were knowledgeable about their homeland and survived by the earliest example of sustainable living in this area. Many followed environmental cycles which resulted in seasonal migrations in pursuit of plants and animals (DeVorsey, par. 1). They created trails throughout Georgia that connected their villages and enabled them to travel more efficiently. They would journey great distances for game, fish, shellfish, and pearls, as well as such mineral resources as salt, flint, pipestone, steatite, hematite, and ochre (DeVorsey, par. 1-2). Indian trails tended to follow ridge lines and drainage divides to minimize stream crossings and swampy bottomlands. Although Lucas Vásquez's colony was short lived, colonizers that followed him took advantage of the trails. The trails often served as boundaries between the land of the whites and the Native American hunting grounds, and later became the foundations for many of the roads that exist to this day (DeVorsey, par. 14).

Over time, white colonizers grew in number and eventually pushed Native Americans out of the area that is now Georgia. From 1805 to 1832, lands belonging to the Cherokee and Creek Indians were ceased by treaty or war and distributed through a system of seven lotteries. Lottery applicants were white males over eighteen, orphans, or widows ("Georgia's", About, par. 5).

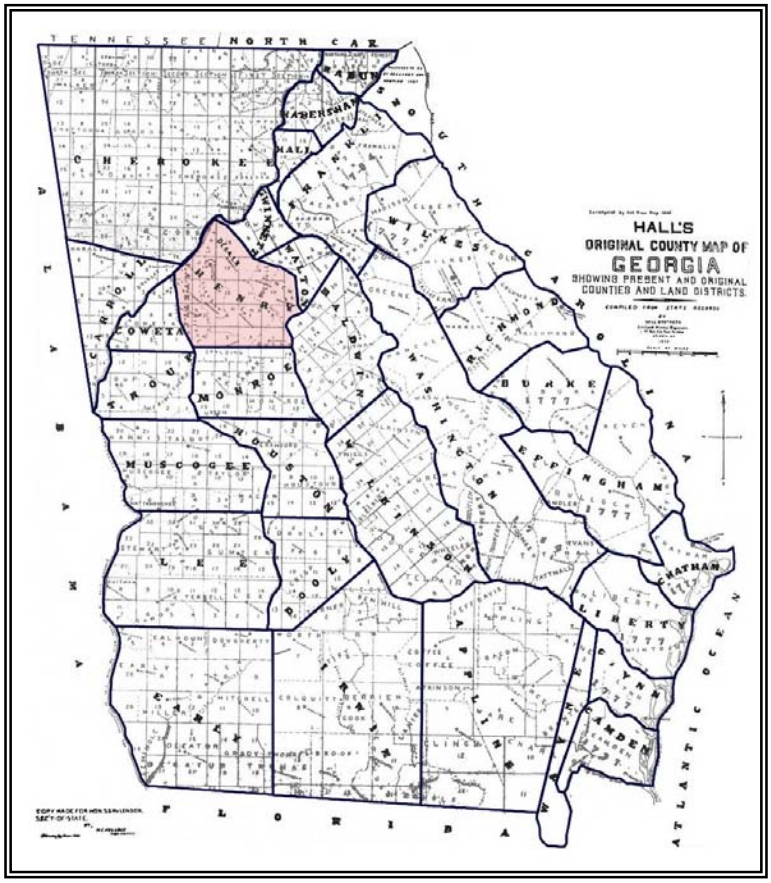


Figure 2.1 Henry County (1895)
Hall's Original County Map of Georgia

Land acquired in 1821 consisted of 202 acre lots and each lottery applicant would claim his grant by paying a fee of $19 ("Georgia's", About, par. 2-5). This land was relinquished by Creek Chief William McIntosh in the Treaty of Indian Springs. This Creek territory was ceded to Georgia and became Dooly, Fayette, Houston, Monroe, and Henry counties Henry County was further divided in 1822 to include Georgia's 56th county, DeKalb County (Georgia, "DeKalb," par 2-3).

DeKalb County is characterized by gently sloping soils on ridgetops to sloping and steep soils on hillsides (United, Soil 1). Typical for the time, most early settlers were farmers whose

mills and ginneries were vital to DeKalb County's early growth. They cleared most of the soils off ridgetops and hillsides for crops of cotton, corn, and small grain. It was not until the 1950s that farming began to decline in DeKalb County. Most of the previously cultivated land succumbed to urban development, while some of it was left to revert to woodland (United, Soil 1-2).

Founded in 1823 in the western part of DeKalb County, Decatur became the county seat. Less than ten years after Decatur's founding, the Western and Atlantic Railroad sought to make it the southernmost stop on its railroad. Decatur citizens were concerned about noise, pollution, and growth, and rejected the offer. As a result, Western and Atlantic Railroad founded a new city, which would later be named Atlanta, to the west-southwest of Decatur (Georgia, "DeKalb," par 3). Despite the railroad's move to Atlanta, rapid growth of DeKalb County has resulted in the development of 80% of the county's land. In 2001, residents of DeKalb County demonstrated their desire to preserve and reclaim open space. Voters approved a $125 million bond for the acquisition and development of park and green space throughout the county (DeKalb, "Welcome," par. 6). Environmental programs thrive in DeKalb County thanks to a combination of governmental leadership and community involvement. See figure 2.3 for a few of DeKalb County's numerous environmentally based programs.

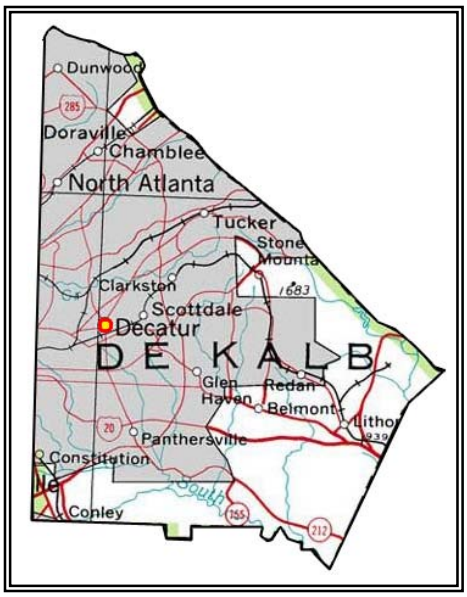


Figure 2.2 Decatur, DeKalb County, Georgia

Although Decatur is the second oldest municipality in the Atlanta metropolitan area, its many residents are young. As of the year 2000,

census reported that the city of Decatur had a total population of 18,147, of which the average age was thirty-six years old. In About Decatur, The City of Decatur boasts "friendly neighbors, tree-lined streets, great schools, parks and playing fields, libraries, colleges," and thriving businesses as the source of its appeal (par. 2). Published in June of 2005, Nature-Friendly Communities applauds Decatur and DeKalb County as one of nineteen communities that have "done the most to safeguard natural landscapes and protect wildlife in the United States" (DeKalb, "DeKalb," 1). Just as they did in Decatur's youth, residents of the city of Decatur endeavor to make their community safe and healthy. Residents of Eastwyck Village demonstrate this effort.

DEKALB COUNTY ENVIRONMENTAL PROGRAMS

Multi-Model Trails
Public Works Department
Creates a network of inter-linking bicycle and pedestrian ways throughout the county. Safe, accessible on-and off-road trails promote cleaner air, calmer traffic, a stronger sense of community, healthier lifestyles, and a reduction in the number of pedestrian and bicycle deaths.

County Greenway Trails Program
Roads & Drainage Division
Provides routes for walking and bicycling away from vehicular traffic through off-road trails and greenway corridors that connect key destination points such as parks, retail areas, schools, churches, MARTA stations, etc.

Keep DeKalb Beautiful
Planning
Facilitates programs and events such as Adopt-A-Road, Yard of the Month, Adopt-A-Stream, Community Clean Ups, Cigarette Litter Prevention, Environmental Education in Schools, Bring One for the Chipper, America Recycles Day, Earth Day, and the Great American Clean Up.

Storm Water Utility
Roads & Drainage Division
Provides funding to resolve problems associated with urban runoff, for correction/restoration projects, and includes floodplain home buy-outs, creation of wetlands, and easements.

Figure 2.3 DeKalb County Environmental Programs

EASTWYCK VILLAGE

The property where Eastwyck Village now resides was undeveloped until 1964 when a non-profit housing cooperative, Eastwyck Village Towne Houses, Incorporated, made its start (University, “Eastwyck,” 5). Located on forty-five acres of land with eighty multifamily

Figure 2.4 1940 aerial of Dekalb County
Figure 2.5 1960 aerial of DeKalb County
(Future site of Eastwyck Village outlined)

Figure 2.6 Eastwyck Village, 1966

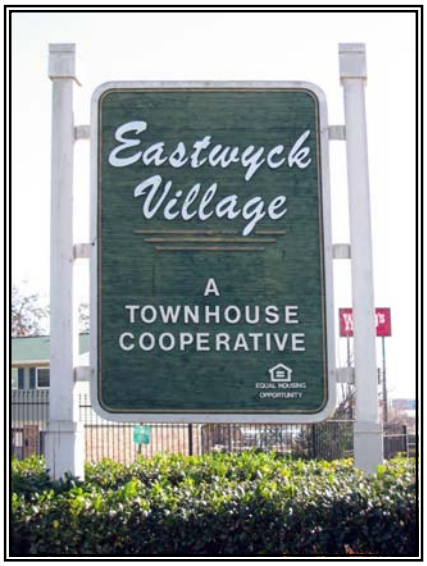


Figure 2.7 Eastwyck Village entrance sign today

buildings, a clubhouse, and 441 homes, the property was developed under Section 221 (d)3 BMIR of the National Housing Act. "Eligibility of families to join the cooperative is based on household income below the standards set by the Department of Housing and Urban Development" (University, "Eastwyck," 5). Approximately thirty years after the inception of Eastwyck Village, the University of Georgia Office of Public Service and Outreach was contacted to assist with plans to renovate the property. Eastwyck Village Towne Houses received a $7.1 million loan from National Cooperative Bank and was eager to make improvements (University, "Eastwyck," 2-5). Through academic courses and under the direction of university professors, an inventory and analysis of Eastwyck Village began.

Recommendations for design, management, and programming were the culmination of several years of work. Focus groups, resident surveys, and numerous site visits resulted in site inventories and analysis that were evaluated in "Health First: Eastwyck Village—A Landscape Management Plan to Heal and Beautify Eastwyck Village." A circulation plan, exercise plan,

and landscape features plan were all produced in an effort to address issues such as buckling sidewalks and lack of resident interaction, erosion, and inappropriate plantings. Surveyed respondents of Eastwyck Village often listed a desire to improve playgrounds as an important step in improving the health of their community. Unpleasant and often poorly located playscapes for children are found throughout the site. Residents complain that existing playgrounds are muddy and dangerous, and there are not enough of them on the property. Figure 2.9 illustrates the results of information obtained through resident surveys. See the appendix for additional surveys and inventories conducted through the University of Georgia College of Environment and Design. These inventories reflect the needs of the community. A desire to include more playgrounds guided the research for Eastwyck Village. From meadows to linked playground structures, chapter 5 and 6 will explore various types of spaces that provide the opportunity for play. This thesis will suggest developmentally stimulating spaces for children by first examining Eastwyck Village through inventory and analysis.

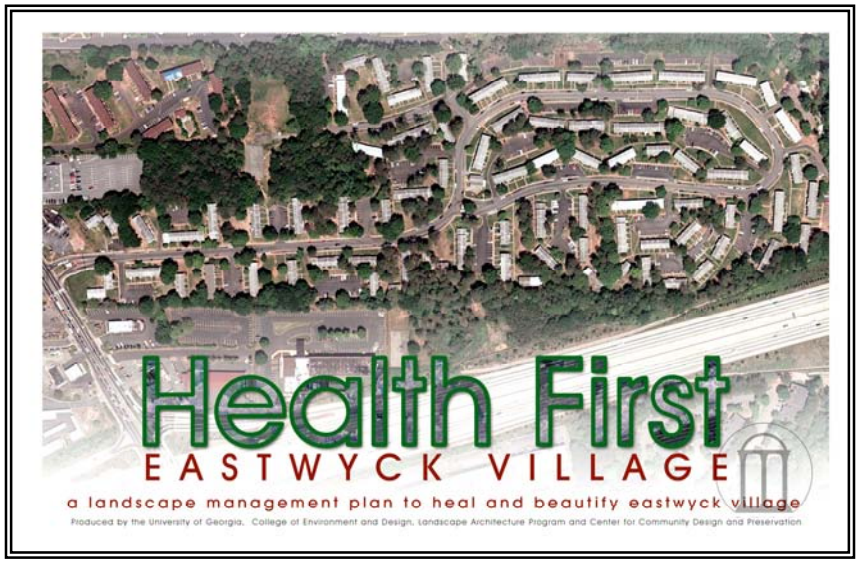


Figure 2.8 A landscape management plan prepared by students and faculty at the University of Georgia

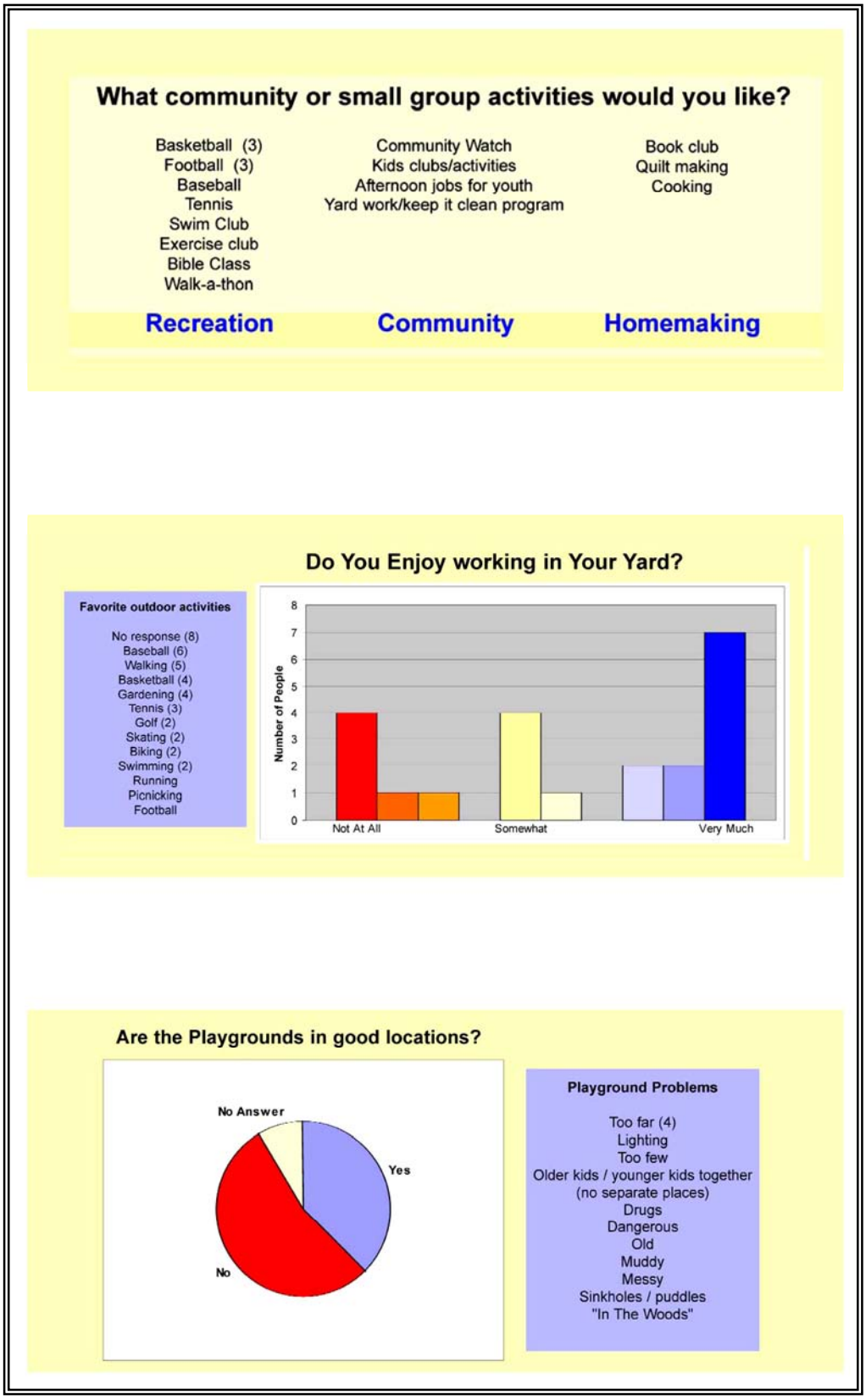


Figure 2.9 Landscape management plan inventory results

CHAPTER 3

EASTWYCK VILLAGE
EXISTING CONDITIONS

SURROUNDING LAND USE

According to Robin Moore, children have a strong desire to wander. "To wander through a diverse terrain is to feel the surroundings pass through one's body as the body passes the surroundings—at one with each other" (Moore, Childhood's 57). The neighboring mixed-use surroundings of Eastwyck Village seem to offer the opportunity to explore. Four elementary schools are located within a mile of the property. In addition to the various retail shops, The Gallery at South DeKalb and numerous restaurants are within walking distance of Eastwyck Village. Shoal Creek Park III provides for a distinctly different experience, offering thirty-six acres of green space (Georgia's, County, par.1). The park has a baseball field, basketball court, multi-use court, playground, picnic area, and trails. Unfortunately, although these many opportunities are within a relatively short distance from Eastwyck Village, children at Eastwyck Village are limited in their exploration by vehicular traffic, overgrown vacant lots, fenced off communities, and a neglected Shoal Creek (see figures 3.1-3.7).

Eastwyck Village is just north of Interstate 20 and less than two miles from the Interstate 285 and 20 interchange. The south side of Eastwyck Village borders Interstate 20 and commercial property. The entrance to Eastwyck Village faces Candler Road, known to many DeKalb residents as one of the most dangerous roads in the county. Between 1996 and 1999, 109 pedestrians were killed in DeKalb County along Candler Road. This busy road is especially

dangerous for children who have a hard time being seen by drivers. In 2002, an elementary school student from Eastwyck Village suffered serious injury when struck by a car while attempting to cross Candler Road ("Pedestrians," par.3). Desire lines can be found throughout the site where residents have attempted to avoid Candler Road (see figure 3.2). As Eastwyck Village extends from Candler Road to the northeast, the property is bordered by two commercial lots and two residential developments. The lot that has created a wedge out of Eastwyck Village's east side is undeveloped. Although this property is owned by Community Cooperative Development Foundation, and not by Eastwyck Village Towne Houses, a portion of the Foundation's property has been fenced in by Eastwyck Village. This area is primarily wooded with the exception of a basketball court that Eastwyck Village residents make use of. Dense vegetation and fencing prevent easy access to the residential communities bordering the north side of the property.

Figure 3.1 Fencing off neighbors

Figure 3.2 Path to Wendy's, south side of property

Figure 3.3 North view of Eastwyck Village entrance

Figure 3.4 South view (toward I-20), from entrance

Figure 3.5 West-facing view, exiting property

Figure 3.6 Neighbors

The rear portion of Eastwyck Village's lot abuts another residential community, separated only by Shoal Creek—possibly one of the best features of Eastwyck Village. Although there are places where the steep banks of the creek have become severely eroded, there are other areas where through bank stabilization creek access could become a community asset. Across the creek there is evidence of creek use (see figure 3.7). Columbia Elementary School is just over a quarter of a mile east from that access point. Traveling north along Shoal Creek, (see Surrounding Land Use Map, figure 3.9), Shoal Creek Park III is approximately a half mile away. Many Eastwyck Village residents avoid this area and view it as scary (University, "Health" 15). This can be attributed to steep slopes, dense vegetation (resulting in low visibility), fear of crime, and abundant garbage.

Figure 3.7 Shoal Creek

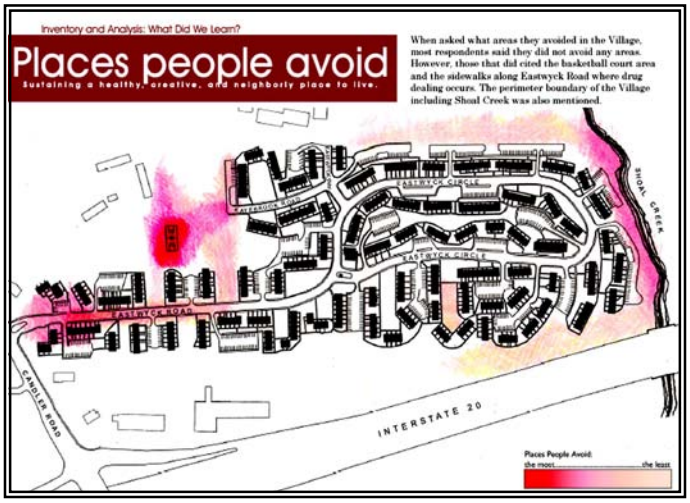


Figure 3.8 Places people avoid

Eastwyck Village, Decatur, Georgia

Surrounding Land Use

Roads

- US And State Highway
- Interstate
- Major Thru Roads

Land Use Within 1 Mile Of Site

Public/ Semi Public/ Residential

- Residential
- Schools
- Post Office
- Cemetery
- Parks
- Vacant/ Undeveloped Land

Commercial / Industrial

- Local/ Neighborhood Retail
- Office Park
- Shopping Centers/ Malls
- Industrial

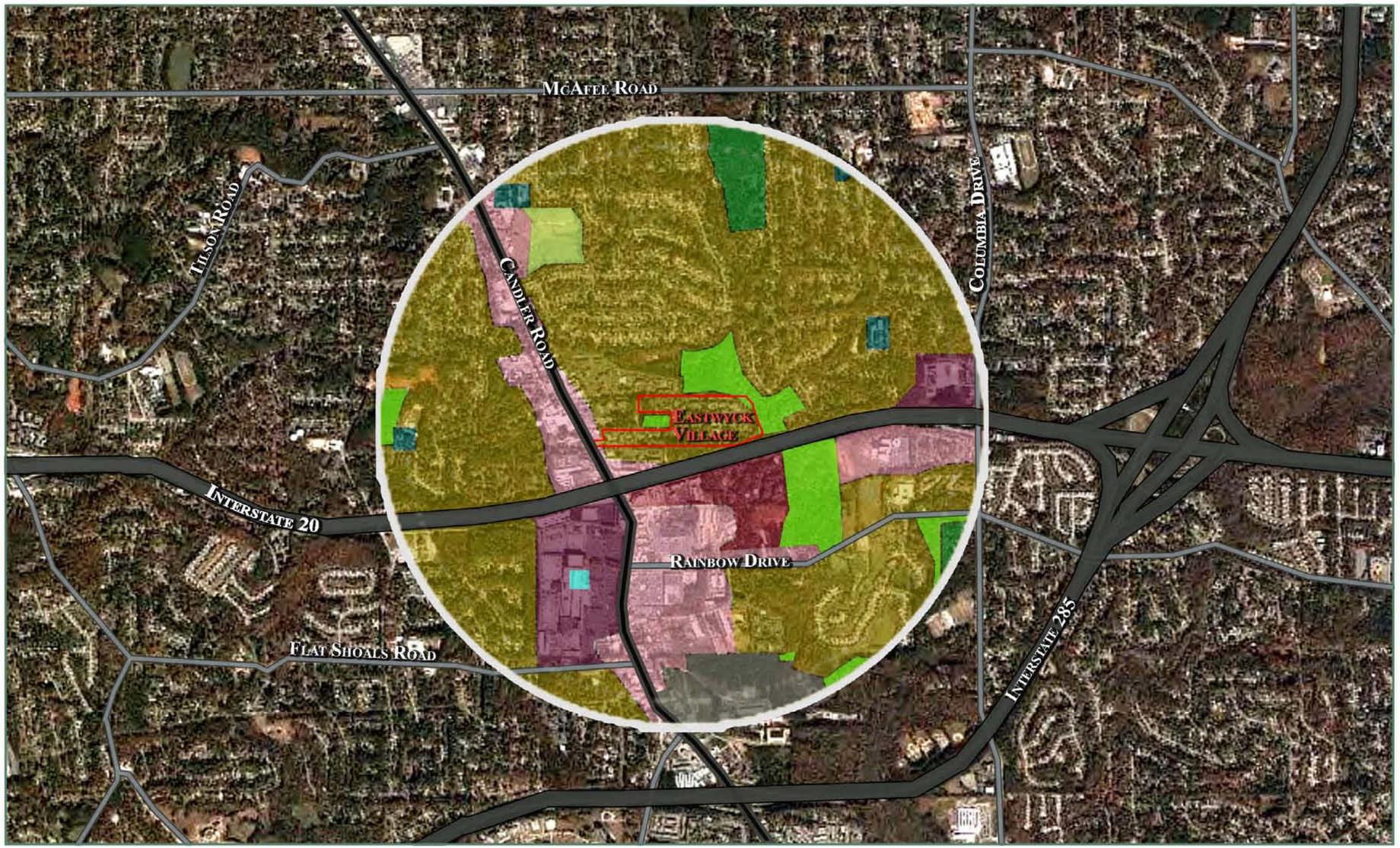


Figure 3.9

INVENTORY AND SITE ANALYSIS

The remainder of this chapter will introduce Eastwyck Village pictorially through a photo survey (see figures 3.12-3.15), as well as through inventory and analysis. The accompanying inventories are pertinent to establishing children's play environments. They include existing community features and an assessment of soil, slope, and hydrology. The compilation of inventories reveal key features noted in the composite analysis.

Existing Community Features

Residents of Eastwyck Village are interested in improving their community, as evident by their addition of a community youth space and community garden. They have also expressed an interest in being more active outdoors. In the past, Eastwyck Village had their own children's softball team. Their team played games with other neighborhood teams in the ball field area. Attempts to provide playgrounds are found throughout the site. Many of them appear to be abandoned and as a result have become dangerous places for children. Although residents desire comfortable public spaces, currently there are few welcoming places on the property for play, self-expression, or socialization. A lack of leadership or ownership of public spaces has resulted in a proliferation of graffiti and garbage.

Figure 3.10 Neglected play equipment

Figure 3.11 Graffiti

Eastwyck Village, Decatur, Georgia

Photo Survey

Figure 3.12

Photo Survey

What begins as undifferentiated space becomes place as we get to know it better and endow it with value.

Y.F. Tuan

NOTE:
Photographs correspond to numbers on Photo Survey (Figure 3.12).

Arrows indicate direction of view.


1 Eastwyck Village entrance


2 View of commercial property


3


4


5


6


7


8


9 Basketball court in distance


10


11


12


13


14


15


16 Mailboxes


17 Slide at edge of property


18


19


20


21 Dense underbrush

Figure 3.13 Photo Survey

Photo Survey

Landscape characteristics matter a great deal to sense of place; the quality of the physical environment underpins both place attachment and satisfaction. Accordingly, the effects of landscape change on human attitudes and behaviors can be modeled.

R.C. Stedman

22 23 24 View of Interstate 20 25 26 Abandoned playground

27 28 29 30 31 32

33 Creek visibility 34 35 36 37

38 39 40 Community garden 41 42

NOTE:
Photographs correspond to numbers on Photo Survey (Figure 3.12).

Arrows indicate direction of view.

Figure 3.14 Photo Survey

PHOTO SURVEY

43

44 Large pines dominate the site

45

46

47 Court just off property

48 Yard waste dumped

49 Playspace

NOTE:
Photographs correspond to numbers
on Photo Survey (Figure 3.12).

Arrows indicate direction of view.

Figure 3.15 Photo Survey


Eastwyck Village, Decatur, Georgia
Existing Community Features
Existing Playgrounds
Community Garden
Eastwyck Village Office/ Meeting Space
Community Youth Space
Pedestrian Access Points/ Walk-Throughs
Mailboxes
Fences
Ball Field
Kayebrook Rd
Eastwyck Way
Eastwyck Circle
Shoal Creek
Property Entrance
Eastwyck Rd
Candler Road
Interstate 20
0
50
100
200
300
N

Figure 3.16

Soil Analysis

Information used in developing the soil analysis was obtained through site assessment, and from the 1979 United States Department of Agriculture Soil Survey of DeKalb County, Georgia. The soil survey reveals that there are five soil types at Eastwyck Village. The primary soil type found at Eastwyck is classified as Urban Land (Ud), occupying approximately 92% of the property. The next most prominent soil classification is Pacolet. Combined Pacolet Sandy Loam (PfE) and Pacolet Sandy Clay Loam (PgC2) cover 5% of the site. Toccoa Sandy Loam (Tf) and Wedowee Sandy Loam (WeE) make up the remaining soils at 2.3% and .4% respectively.

Similar to the metro area of Atlanta, a majority of the land in DeKalb County has been altered by development. According to the USDA, the soils in these areas are listed as Urban Land. The land has been cut, filled, compacted, shaped, and smoothed, which has left soils in the area vulnerable to erosion and runoff (United, Soil 10). In a few instances, Urban Land may contain small wooded or grass areas, like those found at Eastwyck Village. The wooded areas at Eastwyck are made up of pines, tulip poplar, oaks, and sweet gum. At the edge of these wooded areas it is not uncommon to also find maple and dogwoods.

Pacolet and Wedowee soils are both well drained, acidic soils. Pacolet soils can primarily be found at and around the ball field area. These soils are generally deep and easily penetrated by plant roots. Pacolet Sandy Loam is typically found on hillsides with slopes of 15-30%. Use is limited by severe slope. Pacloet Sandy Clay Loam, on the other hand, is well suited for urban uses, with gentle slopes of 2-10%. Adjacent to the Pacolet soils, Wedowee Sandy Loam borders the edge of the property, just north-east of the entrance. Rock outcroppings are not unusual in this soil category. Soils are found on slopes of 10-25% and are well drained.

Eastwyck Village, Decatur, Georgia

Soils

Soil properties	Ud	PfE	PgC2	Tf	WeE
Erosion	Moderate	Moderate	Moderate	Slight/ None	Slight/ None
Runoff	Severe	Moderate	Moderate	Slight/ None	Slight/ None
Flooding	Moderate	Slight/ None	Slight/ None	Severe	Slight/ None

Slight/ None
Moderate
Severe

Soil properties	Ud	PfE	PgC2	Tf	WeE
Permeability	Weak/ Low	Moderate	Moderate	Strong/ High	Moderate
Tilth	Moderate	Weak/ Low	Weak/ Low	Moderate	Moderate
Fertility/ Organic Matter	Moderate	Weak/ Low	Weak/ Low	Moderate	Weak/ Low

Strong/ High
Moderate
Weak/ Low

Figure 3.17

The eastern edge of Eastwyck Village, bordered by Shoal Creek, is made of Toccoa Sandy Loam. The soil properties for each soil type, including Toccoa Sandy Loam, are listed on the soil analysis. Soils are evaluated for the likelihood of erosion, runoff, and flooding, as well as permeability, tilth, and fertility. Soils listed with a moderate likelihood of runoff, erosion, or flooding may overcome these limitations by planning. Toccoa Sandy Loam received a rating of "severe" when measured for its likelihood of flooding. Severe classifications are unfavorable for development or construction. Intensity of permeability, tilth, and fertility/organic matter are good indicators for a variety of uses. Overall, site limitations for playgrounds, picnic areas, paths, trails, and gardens, are slight to moderate.

Slope Analysis

Organized into three slope zones, the Slope Inventory reveals that Eastwyck Village has predominantly gentle slopes. Flat to gentle slopes characterize 72% of the site. Steeper slopes are interspersed throughout the site. Moderate slopes of 10-20% represent 15% of the site. The remaining 13% of the sight is categorized as steep slopes of 20% or higher. Moderate to steep slopes are often adjacent to homes where green space is found. With the exception of the ball field area, roads and parking lots utilize the majority of the gentler slopes. Although the steeper slopes occupy less surface area on the site, steeper slopes are an indicator of potential management issues and were carefully considered when establishing potential use areas.

Figures 3.18 Slopes found throughout Eastwyck Village

Eastwyck Village, Decatur, Georgia

Slopes

Flat- Gentle, 0-10%
72% of site- 32 acres

Moderate, 10-20%
15% of site- 7 acres

Steep, 20% and above
13% of site- 6 acres

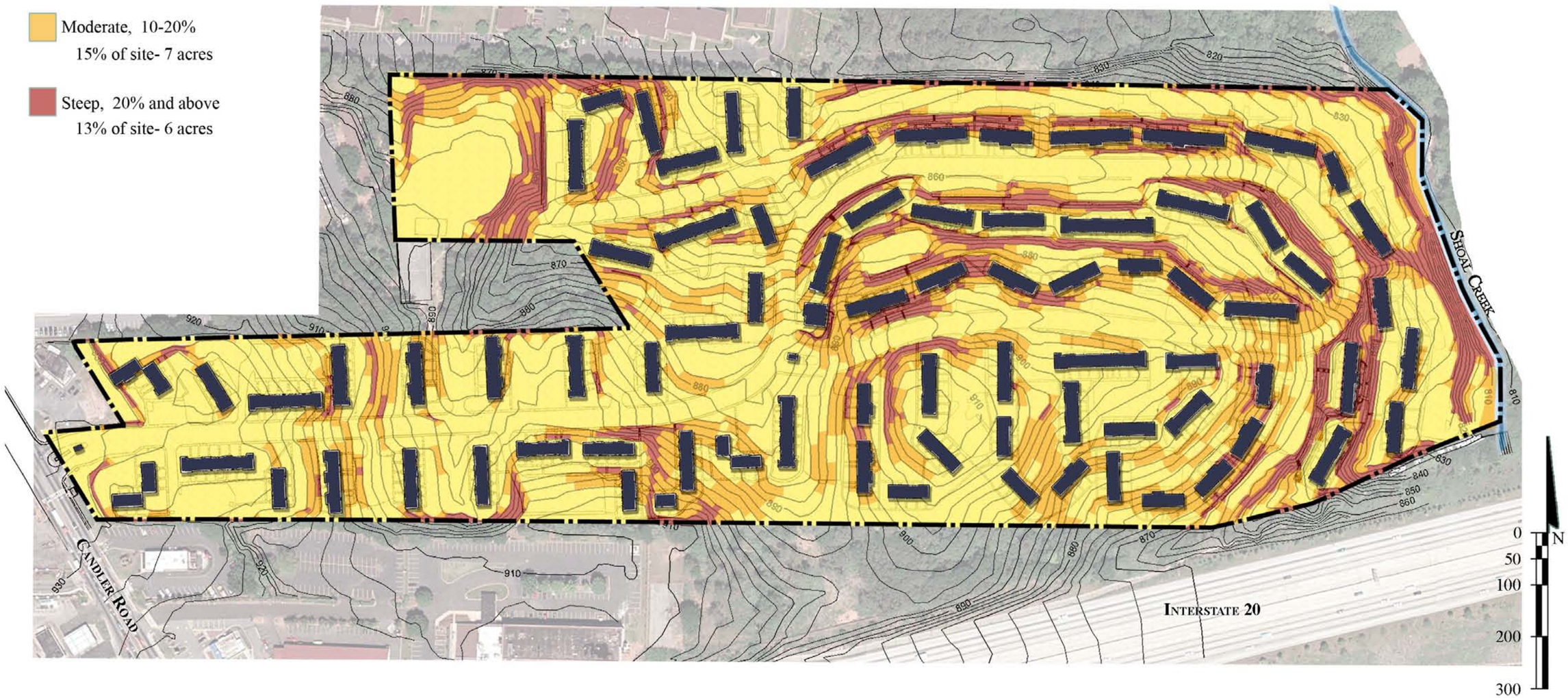


Figure 3.19

Hydrology

The center line of Shoal Creek marks the 700-foot-long eastern edge of Eastwyck Village. Shoal Creek originates northwest of Eastwyck Village, less than a quarter of a mile south of U.S. Route 278 in Decatur. See figure 3.20. Cobbs Creek joins it, just north of Flat Shoals Parkway, to enter South River, a tributary of Ocmulgee River. Although Shoal Creek has been designated for fishing, the creek cannot sustain fish life. State water quality standards specify that aquatic life should be supported in Shoal Creek, yet in 2002, the Environmental Protection Agency assessed Shoal Creek and found it to be impaired. Likely caused by urban runoff and stormwater discharge, fecal coliform and pathogens were detected (United, "Assessment"). The hydrology at Eastwyck Village directly affects the health of Shoal Creek. On average it will rain 120 days out of the year in the DeKalb County area. This will result in about 50 to 55 inches of rain a year.

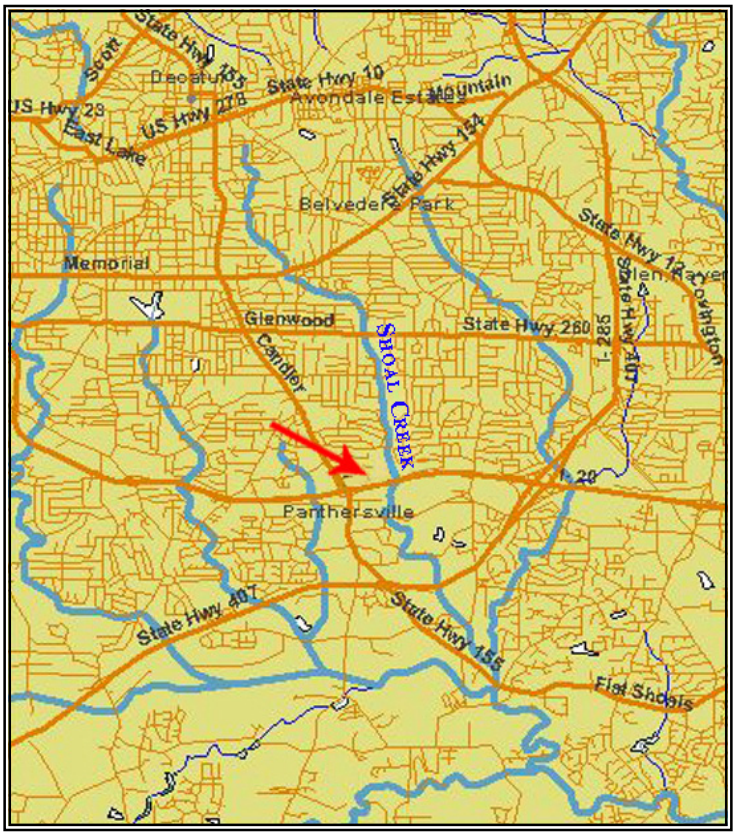


Figure 3.20 Location of Eastwyck in relation to Shoal Creek

The driest months tend to be September, with an average of 3.6 inches, and October, with an average of 3.4 inches. March is generally the wettest month of the year, producing 5.8 inches of rain (Georgia, "Georgia's"). As storm flows make their way down slope, they carry chemicals, animal waste, automobile oils, pesticides, etc. The impervious surfaces at Eastwyck Village, which account for 34% of the property's surface area, and the large parking lot on the adjacent property to the south cause runoff to quickly move to Shoal Creek.

Figures 3.21 Fast moving runoff causes topsoil to be flushed away

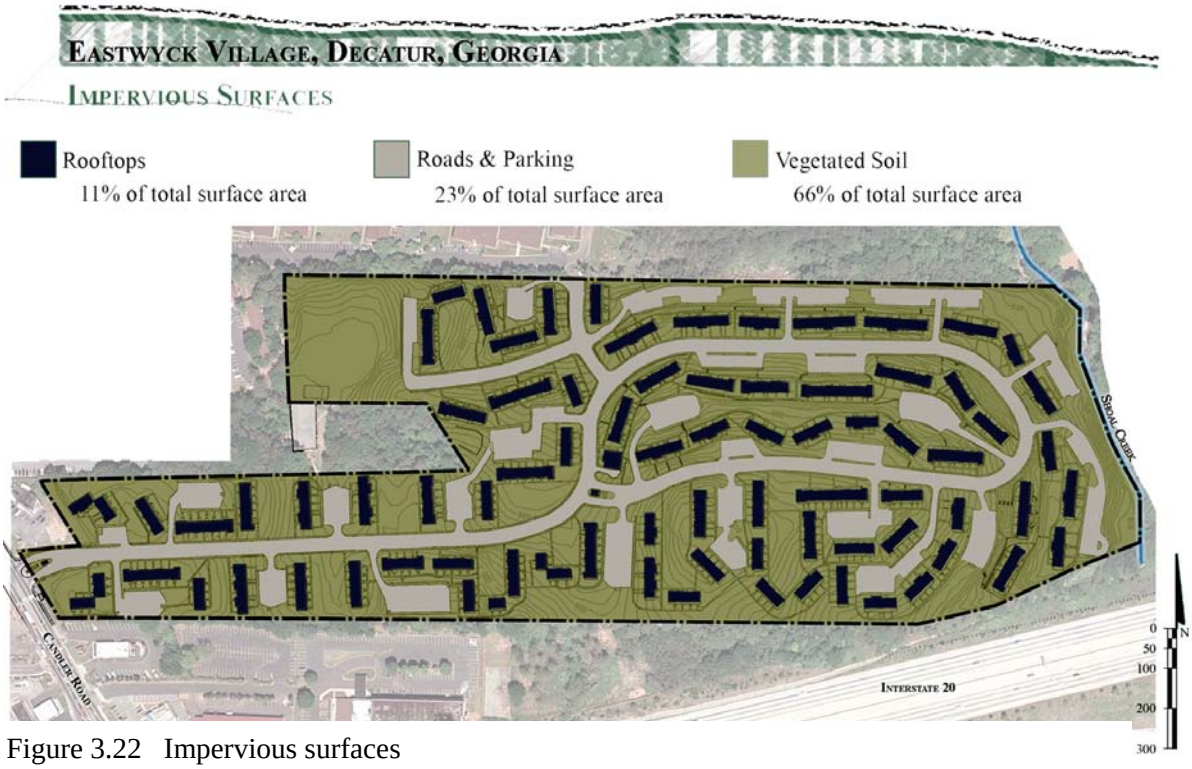


Figure 3.22 Impervious surfaces

Runoff, erosion, frequently flooded areas, and an aged storm sewer system are all problems at Eastwyck Village. The Hydrology map highlights these issues. This analysis was created from topographical information obtained from United States Geological Survey, storm sewerage information obtained from a survey by Watts & Browning Engineers, and through visual evaluation. Runoff from the neighboring parking lot has caused frequent flooding problems between two buildings on the south side the property. Rather than use the more pervious surfaces to aid in the infiltration of runoff, flumes, drain inlets, and catch basins are used to move the water quickly to the creek. Several parking lots lie within the floodplain. Runoff drawn to this area has created significant erosion along Shoal Creek bank.

Figures 3.23 Shoal Creek, dumping and erosion

Eastwyck Village, Decatur, Georgia

Hydrology

Figure 3.24

MicroClimate

Eastwyck Village, which falls within the Atlanta weather reporting station, has an annual average temperature of 74F°. Summers are long and humid with temperatures usually in the 80s to 90s. It is not unusual to have 30 to 60 days where temperatures are over 90°F. Summer evenings can be pleasant with overnight lows ranging from 60 to 70 degrees. The average high temperature during the winter is in the 50s, while the average low temperature is 30°F. Temperatures of 32°F are common for 50 to 70 days during the winter months (National, par.7-15).

Information regarding prevailing winds was provided by the United States Department of Commerce, and through the National Climatic Data Center's Climatic Wind Data for the United States, 1998. The average wind velocity for the Atlanta area is 9 miles per hour, with peak gusts of up to 77 miles per hour. The Microclimate map illustrates prevailing winds during summer and winter months. Sun and shade patterns are also identified.

Composite Analysis

Existing community features, soils, slope, hydrology, and microclimate are the foundation for the Composite Analysis (see figure 3.26). This Composite Analysis serves as a visual summary of the significant elements at Eastwyck Village and will be used as a guide during design development. The study of child development and research into children's play spaces past and present, will offer insight into the needs of children and will enable conscientious design and management alternatives for Eastwyck Village.

Eastwyck Village, Decatur, Georgia

MicroClimate

Year Round Sun (High Noon)

Sumer Sun/ Winter Shade (High Noon)

Year Round Shade (High Noon)

Prevailing Warm Weather Winds

Prevailing Cool Weather Winds

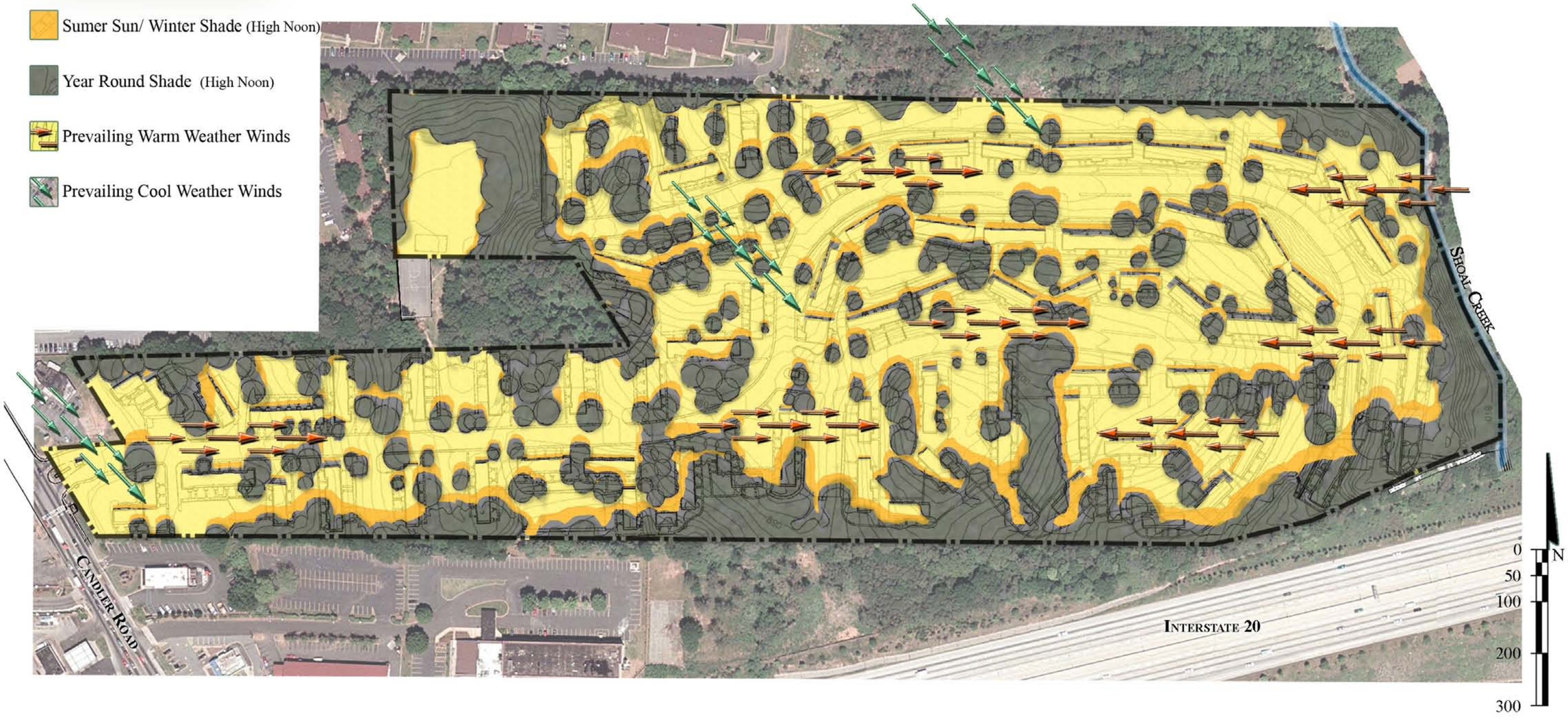


Figure 3.25

Eastwyck Village, Decatur, Georgia

Composite Analysis

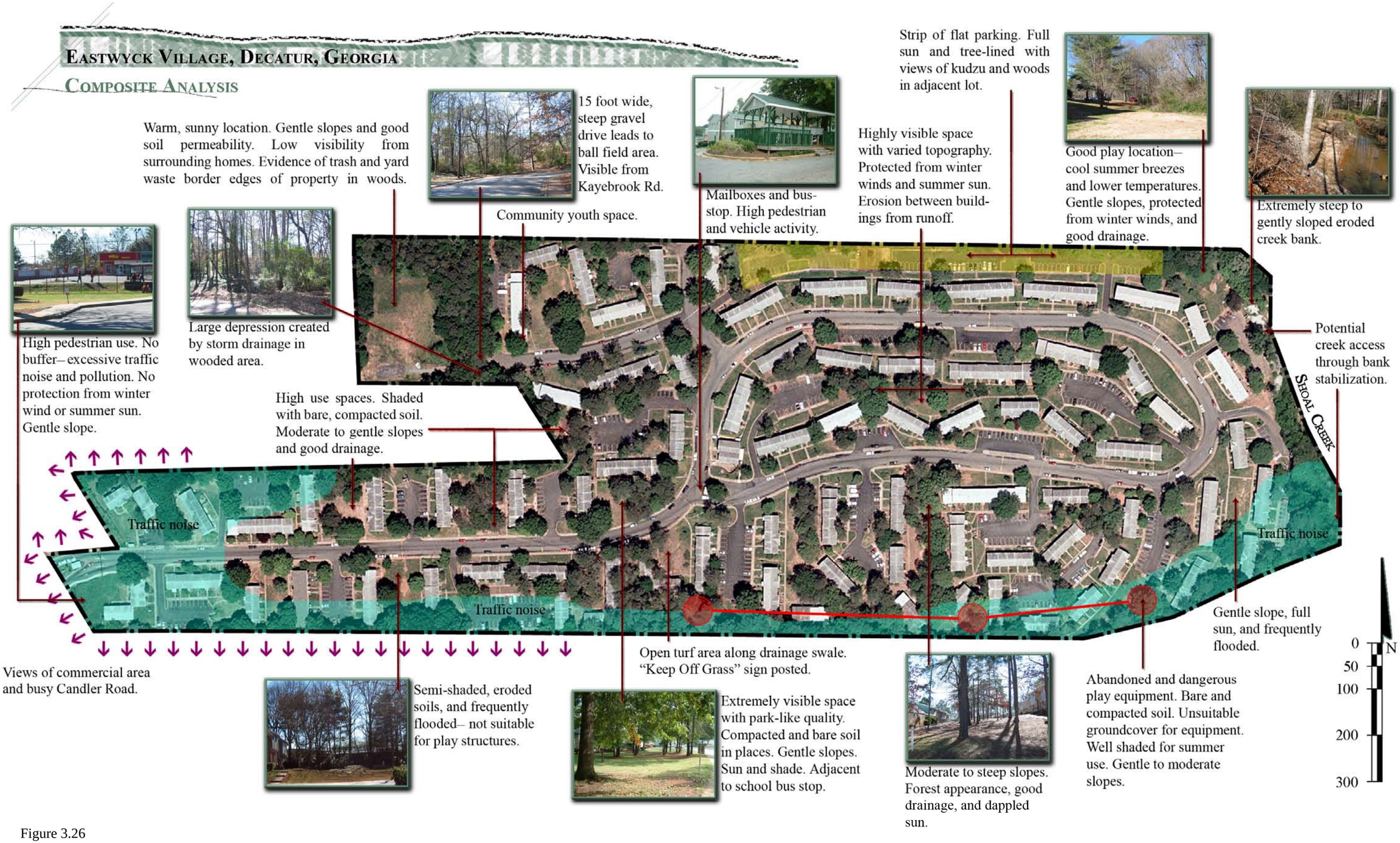


Figure 3.26

CHAPTER 4

CHILD DEVELOPMENT AND PLAY

Figure 4.1 Infant observation dome, 1900s

> The developing person is no less a wonder after birth than in the womb. Physically, mentally, socially, we are always in the process of becoming.
>
> David G. Myers

I. HISTORICAL OVERVIEW OF CHILD DEVELOPMENT

Psychoanalytic Theory

The earliest and simplest theory of play, the *surplus energy theory*, claimed that play was the "aimless expenditure of exuberant energy" (Frost 3). Often viewed as an obstacle of mental activity, play was regarded as a harmful distraction to learning (Piaget, Play, Dreams 151). It was not until researchers began studying children's play and asking why children play that attitudes began to change. In the late 1800s Sigmund Freud announced a way to understand how the mind works and affects behavior. Through the process of working with mentally ill patients, Freud established the psychoanalytic approach. Previously ignored by the scientific

community, the developmental life of children before adulthood was a significant part of his theory. Freud held that the root of his patients' illnesses was found in unresolved conflicts in early childhood. He maintained that the development of a child's personality is influenced by sexual instincts and the way in which parents respond to these instincts throughout a series of psychosexual stages every child experiences (Shaffer 40). Freud's psychoanalytic theory "stipulates the existence of a psychic unconscious, and insist[s] on analysis and the integration of the unconscious" in order to understand what influences our behavior (AROPA). Freud believed that play is motivated by an instinctual pursuit for pleasure; however, during play, it is the unconscious mind at work. Using fantasies to cope with problems too difficult to deal with in reality, Freud claimed that play is a coping mechanism and safe environment for children to communicate their fears and anxieties (Turner 16).

A disciple of Freud's, Erik Erikson expanded Freud's psychoanalytic theory to include psychosocial stages. Erikson accepted Freud's psychosexual stages of development, but, where Freud focused on the personality as primarily pleasure seeking—establishing itself through sexual urges in the first years of life (see figure 4.2)—Erikson concentrated on social influences. He laid out eight stages, from birth to late adulthood, in which human beings face social crises at different biological stages of life (Shaffer 42). See figure 4.3. At each stage of development there is an influential social agent, and a struggle between conflicting personality characteristics. Each stage is a gradual progression toward personality development. Erikson believed that play facilitated children's progression from one stage to the next. Beginning at birth, he stated that children's play is initially focused on their own body. Identified as autocosmic play, children explore their world through sensual perceptions, kinesthetic sensations, and vocalizations.

FREUD'S PSYCHOSEXUAL STAGES OF DEVELOPMENT

Stage / Age	Description
Oral Birth-1yr.	Traumatic beginning; sex instinct centers on oral activities; infants weaned too early may later crave contact and become over-dependent on spouse.
Anal 1-3 yrs.	Voluntary urination and defecation are methods of gratifying sex instinct; children punished for toilet training accidents may become inhibited, wasteful, or messy.
Phallic 3-6 yrs.	Pleasure is derived from genital stimulation; incestuous desires for opposite-sex parent emerge; conflicting desires cause child to internalize sex-role of same-sex parent, seen as rival.
Latency 6-11 yrs.	Traumas from previous stage result in repressed sexual urges; urges are channeled into play; child internalizes social values and gains problem-solving skills in school.
Genital 12 yrs.-on	Puberty reawakens sexual urges; learns to express urges in socially acceptable ways; healthy development results in marriage and child rearing.

Figure 4.2

According to Erikson, children progress from autocosmic play to the microsphere and then macrosphere. The microsphere is the "small world of manageable toys" where children cope with ego issues by mastering toy things. The ego must handle the experience of breaking toys, toys belonging to others, or confiscation of toys by adults. Lastly, the macrosphere usually occurs at nursery-school age when children learn to share with others (Erikson 220-221). Erikson believed play to be an integrated aspect of development. Like Freud, Erikson believed development and play to be a very personal endeavor where ultimately the child searches for ego identity. Freud compared a child at play to a creative writer, very seriously creating her own imaginary world. It is through play that children are able to work through psychosocial stages of development. At each stage children add new complex understandings of the world and through play they deal with those new understandings.

ERIKSON'S THEORY OF PSYCHOSOCIAL DEVELOPMENT

Stage / Age	Description
Infancy 1st year	Trust vs. Mistrust: If needs are met, infant develops a sense of basic trust. Key social agent: primary caregiver.
Toddler 2nd year	Autonomy vs. Shame and Doubt: Toddler strives to learn independence and self-confidence. Key social agent: parents.
Preschooler 3-5 yrs.	Initiative vs. Guilt: Preschooler learns to initiate tasks and grapples with self-control. Key social agent: family.
Elementary School 6yrs.-puberty	Competence vs. Inferiority: Child learns to either feel effective or inadequate. Key social agent: teachers and peers.
Adolescence teen yrs.-20s	Identity vs. Role Confusion: Teenager works at refining a sense of self by testing roles, then integrating them to form a single identity. Key social agent: society of peers.
Young Adulthood 20s-40s	Intimacy vs. Isolation: Young adult struggles to form close relationships and to gain the capacity for intimate love. Key social agent: lovers, spouses, and close friends.
Middle Adulthood 40s-60s	Generativity vs. Stagnation: Middle-aged person seeks a sense of contributing to the world, such as through family and work. Key social agent: spouse, children, and cultural norms.
Late Adulthood Late 60s and up	Integrity vs. Despair: When reflecting on his or her life, the elderly person may feel a sense of satisfaction or failure.

Figure 4.3

Behaviorism/Social Learning Theory

Many Americans, like psychologist John B. Watson, disagreed with Freud and criticized the psychoanalytic theory as pure mysticism. Eager to follow a scientific approach to understanding development, American psychologists embraced a new branch of psychology called behaviorism, introduced by Watson in 1913 (WGBH, par.2). Behaviorists studied behavior without making reference to mental processes, and did not acknowledge the developmental differences between adults and children. Their research was contingent on the

theory that behavior is controlled by external stimuli, responses, learning histories, and principles of reinforcement (Myers 238). B.F. Skinner was one of the most influential behavioral theorists. The foundation of his work was governed by explaining behavior by examining the consequences of an action. Skinner did not believe that development occurred in stages. He believed that development occurred through the process of operant conditioning, where behavior is controlled by reward and punishment. In contrast to Skinner's beliefs, out of behavioral theory grew social learning theory (Turner 19).

Social learning theory acknowledges social aspects of one's environment on behavior while still emphasizing the analysis of visible behavior. Well-known social learning theorist Albert Bandura suggested that children attempt to act like their models. Through extensive laboratory studies, he found that children learn by observation. From altruism, sharing, sex-typing, and aggression Bandura found that children observed behaviors and then imitated them (Oates 25). Behaviorism and social learning theory dominated the world of psychology in the United States until the 1950s (Thagard 10). Like Bandura and Erikson, other developmental theorists would consider social influences in explaining behavior.

Cognitive-Developmental Theory

About the same time behaviorists began studying stimuli and responses, developmental psychologist Jean Piaget asserted that the growth of knowledge consisted of logical cognitive stages. The brain and mind develop simultaneously, thus biological and cognitive factors play a role in development. After conducting experimental studies on the growing mind, Piaget studied his own children's intellectual development from infancy to early childhood. Piaget concluded that children's thinking and logic are "initially entirely different from those of adults" (Smith

68). At the start of a child's life she begins to make sense of her surroundings. She forms concepts based on her first experiences—assimilation. Building on those first concepts, her brain continues to develop as she is presented with new experiences. Children first assimilate new experiences into memory and then later adjust their concept of that experience by incorporating new information about that experience—accommodation. "Newborns reflexively suck everything that touches their lips (assimilation), but, after several months of experience, they construct their understanding of the world differently. Some objects, such as fingers and the mother's breast, can be sucked, but others, such as fuzzy blankets, should not be sucked (accommodation)" (PageWise, par. 1).

Piaget proposed that cognitive development occurs in four distinct stages throughout a child's life—Sensorimotor stage, Preoperational stage, Concrete Operational stage, and lastly the Formal Operational stage (see figure 4.4). Each developmental milestone graduates into the next through a system of assimilation and accommodation (Myers 71). In Play, Dreams, and Imitation in Childhood, Piaget admits that it is difficult to distinguish play in early infancy (89). At birth, behaviors fulfill purely functional pleasures. Repeat behaviors, such as sucking apart from meals, is considered reflex adaptation. He maintains that at some point during the sensorimotor stage play is evident by increased imitation, proceeded by relaxation of the effort at adaptation and exercising behaviors for the mere pleasure of mastering them, thus feeling powerful (Piaget, Play, Dreams 89). As children interact with the world, they increasingly, actively direct their learning through play. Play is the vehicle for constructing knowledge and graduating into the next stage of development.

PIAGET'S THEORY OF COGNITIVE DEVELOPMENT

Stage / Age	Description	Developmental Milestone
Sensorimotor Birth-2 yrs.	Infants use their senses and motor capabilities to understand the world around them.	Object permanence–an awareness that objects exist when not perceived. Stranger anxiety.
Preoperational 2-6 yrs.	Ability to use symbolic functions–represent things through language, pretend play, and drawing.	Ability to pretend, inability to perceive another's point of view.
Concrete Operational 7-11 yrs.	Thinks logically about concrete events. Able to understand logical principles, perform arithmetical operations, and grasp concrete analogies.	Conservation–a substance remains the same despite changes in shape. Mathematical transformations.
Formal Operational 12 yrs.-adulthood	Ability to think abstractly. Can think in terms of possibilities and probabilities, and thinks about thinking.	Scientific reasoning. Potential for mature moral reasoning.

Figure 4.4

Social-Cultural Theory

Lev Vygotsky shared Piaget's opinion that social factors contribute to cognitive development. However, unlike Piaget, in addition to social influences, cultural influences are key to Vygotsky's theory of development. He regarded cognitive development as reflecting the child's social, historical, and cultural background (Garrick 26-29). Whereas Piaget viewed the child as an explorer directing her own learning, Vygotsky emphasized the importance of adults and more competent peers. Vygotsky saw the child as an apprentice, needing guidance and interaction. He maintained that children have a *zone of proximal development* that enables them to progress to the next step in development. The zone of proximal development includes activities that children can only perform with the help and support of another person. He

suggested that these activities result in developmental processes that would not occur without the interaction of others (Oates 33-37).

In addition to the zone of proximal development, Vygotsky believed language and culture to be a significant aspect of cognition and learning. Speech is a resource for thought. It is through the tool of language that one forms thought and personality characteristics. According to Vygotsky, "thought is not merely expressed in words; it comes into existence through them" (Schütz, par. 4). All thought becomes internalized only after arising first in actions between people (Oates 285). Over time, language, tools, and symbols have changed and influenced cultures around the world. Tools (like language) were developed for dealing with the environment, humans became more and more aware of the properties of objects, developed ways of co-operating and communicating, and developed capacities for planning. Children developed cognitively in these changing cultures through a process of socialization and then internalization. Social interactions offer children exposure to their own culture through language. Children internalize their experience into cognitive processes and then rehearse it through play. According to Vygotsky, human cognition will continue to change, as cultures change as a result of technological advances (Oates 34).

Summary

Contemporary theories of child development and play are largely based on psychoanalytic, social learning, and cognitive-development theories. The psychoanalytic approach to understanding child development is valuable in its ability to demonstrate social and emotional aspects of development. Erikson sites key social agents (parents, peers, etc.) as influencing factors in the endeavor to search for identity. Social learning theory describes

development and behavior as a learning process in which the environment plays a key role. Through the consequences of one's behavior learning theorists believe that most, if not all behavior can be attributed to environmental experiences (Turner 20). Commonly used as a tool for managing behaviors, social learning approach is often demonstrated in the classroom through a system of reward and punishment. Cognitive development theory fosters an understanding of language and cognitive development. Piaget's assertion that biological and cognitive factors both play a role in development reinforces his model of development milestones. Throughout stages in a child's life cognitive abilities are dependent on biology. Biology makes it possible for cognitive development to occur; however, it is through a child's own experimenting that she begins to learn. In Play and Development, Piaget maintains that "in order for a child to understand something, he must construct it himself, he must re-invent it. Every time we teach a child something, we keep him from inventing it himself" (27). Some developmental theorists believe that Piaget had more of an impact on the way people view children than any other single theorist (Turner 18).

Within recent years, Vygotsky has received a great deal of support from developmental psychologists. Often compared alongside Piaget's cognitive development theory, Vygotsky's social-cultural theory deviates from Piaget's theory with respect to culture and environmental influences. Piaget believed that human nature could be described in the abstract sense, without reference to social and historical context. John Oates provides an example in The Foundations of Child Development: "If our main image of human nature is 'productive', this term means something different when we talk about Stone Age workers, nineteenth-century factory workers, and twentieth-century factory workers" (34). Therefore, in order to understand the development of a child we must recognize the social and cultural influences that exist for that child. In

addition, Vygotsky emphasized the importance of social interactions. Specifically, through the zone of proximal development teachers, mentors, and peer tutors become essential to development.

II. PLANNING FOR PLAY

Healthy growth and development include physical, emotional, social, and intellectual growth, and this emerges through play. Theories of child development (mentioned above) provide a framework for current ideas about approximate developmental milestones (see figure 4.5). A compilation of appropriate activities based on developmental milestones can serve as a resource for providing appropriate play areas for children. Aase Eriksen likens a child's experience in an environment lacking in social or intellectual stimulation to that of a malnourished child. Both experiences are harmful to child development and can have effects that carry on into adulthood (3). "By offering a variety of activity settings, the planned environment can arouse the child's interest, allow exploration and development at the child's own pace, and stimulate the child in various ways simultaneously" (Eriksen 2). In order to design a diverse play environment that fosters the growth, health, and well-being of children, it is essential that designers be aware of the developmental capabilities of children at various ages. Physical, intellectual, emotional, and social development were all considered in the creation of figures 4.5-4.9 and the accompanying text in which developmental milestones are anticipated and explained. Categorized by age, physical, intellectual, language, social, and emotional abilities are listed along with possible activities and behaviors. Cultural expectations and individual health differences are only two of many factors that can effect the development of

children. Children grow and develop at different rates; therefore, the following data was used only as a guideline for the design of Eastwyck Village's Playscape Plan (see chapter 5).

Stimulating Development and Learning

Physical stimulation is comprised of impressions received through the senses and activities that promote movement. All development begins with physical stimulation. Seeing colors and forms and hearing sounds are all types of physical stimulation. Physical development also takes place as infants grow and begin to gain control of their movements. Children experience significant growth in the first two years of life. Boys reach half their adult height at approximately two years old; for girls it is about eighteen months. After this initial growth spurt, children usually grow two to three inches per year throughout childhood (Myers 69). During this growth process children encounter physical challenges that promote development, whether it is walking or tying their shoes. The older children get, the more one type of stimulation will effect various aspects of development. An experience rich in sights, sounds, textures, and walking surfaces will encourage physical stimulation in a baby; however, as she matures, her exposure to these elements will increasingly invoke intellectual development.

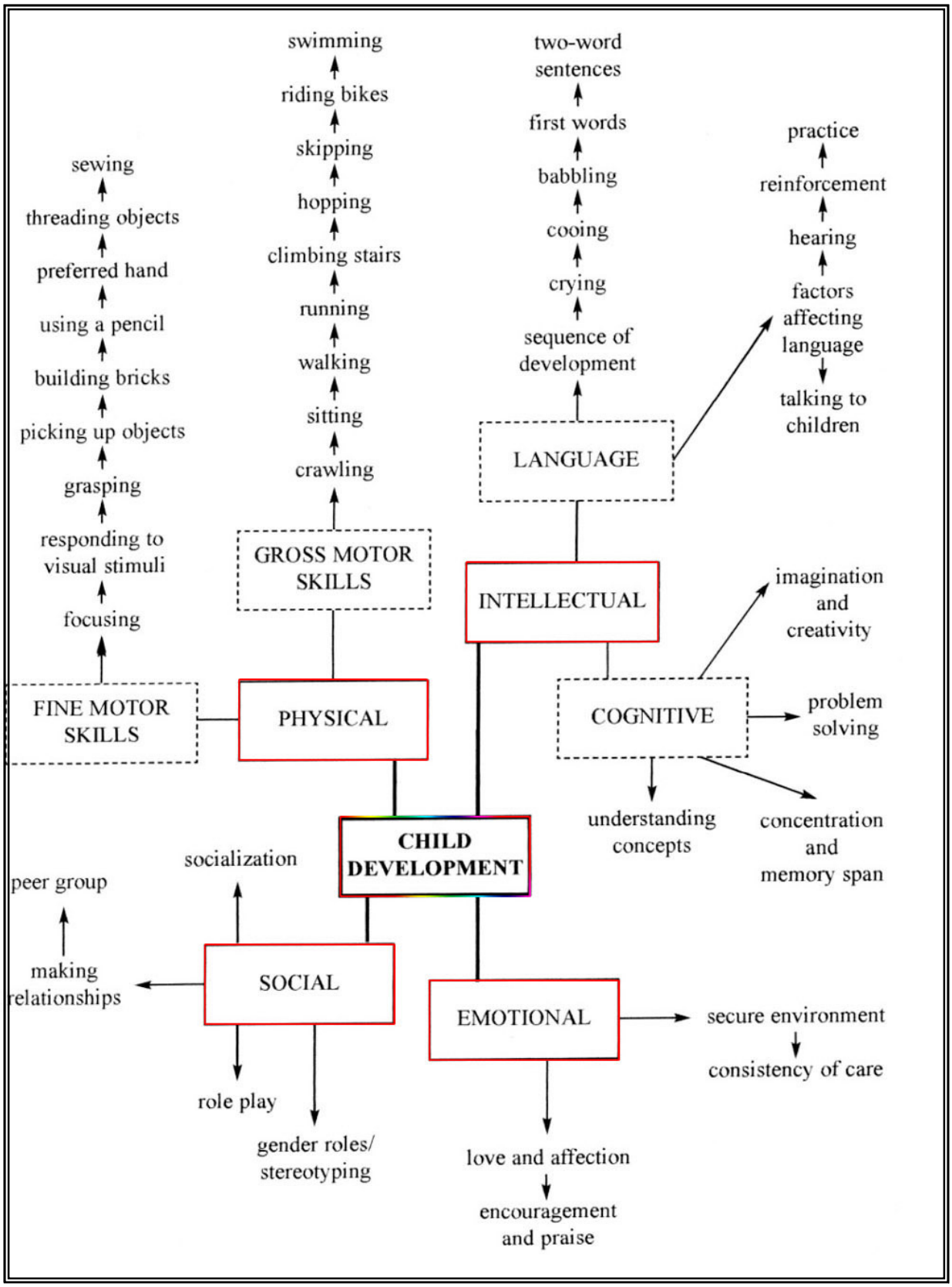

CHILD DEVELOPMENT
PHYSICAL
GROSS MOTOR SKILLS
swimming
riding bikes
skipping
hopping
climbing stairs
running
walking
sitting
crawling
FINE MOTOR SKILLS
sewing
threading objects
preferred hand
using a pencil
building bricks
picking up objects
grasping
responding to visual stimuli
focusing
INTELLECTUAL
LANGUAGE
two-word sentences
first words
babbling
cooing
crying
sequence of development
practice
reinforcement
hearing
factors affecting language
talking to children
COGNITIVE
imagination and creativity
problem solving
understanding concepts
concentration and memory span
SOCIAL
socialization
peer group
making relationships
role play
gender roles/ stereotyping
EMOTIONAL
secure environment
consistency of care
love and affection
encouragement and praise

Figure 4.5

According to Piaget's theory, how a child perceives his or her environment, and how a child puts stimuli in order and makes sense of it are manifestations of intellectual development (Piaget, Play, Dreams 87). It is possible to create situations in which intellectual stimulation occurs outside of the classroom. Building with sand and role-playing are expressions of intellectual stimulation. Intellectual development can occur through exploring, working on one's own, communicating, using new materials, undergoing new experiences, experimenting, and working with others (Eriksen 3). Working as a team player or socializing with others is intellectually stimulating, as well as emotionally and socially stimulating. As play moves from the security of the home to playgrounds and schools, children are exposed to emotional and social stimulation. "Children's feelings of being liked and trusted, their sense of sympathy for others, their ability to channel destructive behavior into constructive energy—to talk instead of hit—are all affected by the environment" (Eriksen 2). Children learn to deal with stressful situations and to use language to communicate their needs. Social stimulation is crucial to child development—it involves connecting with peers and adapting egocentric views to include other children and adults. From infancy to early adolescence, playgrounds can be an important outlet for social development, as well as emotional, intellectual, and physical development.

Infancy: Two Years Old

By the age of two, children are very curious and restless. Their sight has improved and they are eager to absorb visually stimulating images. Just as they did when they were younger, they enjoy sensory games; therefore, they respond well to experiences that require them to use all of their senses. They enjoy singing songs, listening to stories, yelling on the playground and laughing. They have begun to construct simple sentences and are speaking a lot more.

ANTICIPATED DEVELOPMENT BY THE AGE OF TWO

Physical

Still interested in sensory play. Climbs and walks up and down stairs. Pushes and pulls toys, beginning to push in desired direction. Throws a ball overhead and kicks it. Sits on tricycle and moves it with feet, not pedals. Holds pencil in preferred hand with thumb and first two fingers. Scribbles circles and dots and imitates a vertical line. Puts on socks and shoes, not necessarily on the correct foot. Paints with whole arm movement.

Intellectual

Recognizes smaller details. Enjoys picture books and turns pages slower. Curious about surroundings, but has little understanding of dangers. Impulsive. Engages is simple role playing and make-believe. Builds a tower of six or seven blocks. Can point to body parts (knees, elbows, etc.). Recognizes self in photo. Creates stories with miniature toys.

Language

Uses 50-200 words and can understand many more. Puts two or more words together to form sentences. Beginning to listen with interest and responds to conversation directed toward him. Refers to self by name and talks continually during play. Joins in on familiar songs and rhymes. Likes repetition. Is capable of following direction.

Social

Follows and imitates caregiver. Plays near other children, but not with them. Has no idea about sharing. Toward the end of 2nd yr. will play with other children for a short time.

Emotional

Needs a lot of attention, reassurance, and love. Very dependent on adults and jealous of attention given to others. Throws tantrums. Is easily distracted.

Figure 4.6

Close to the age of two-and-a-half they are eager to assert their independence by spending more time with other adults and children on the playground. They are refining their motor skills and can play games of catch and toss, work puzzles, and make a train with cubes (Turner 99). Simple play materials are best at this age. Blocks can be an excellent toy, especially blocks of different sizes, colors, and textures. According to Erikson, at this stage in life toddlers will learn to feel either shame and doubt or independence, depending on their social interactions with parents or caregivers. Providing a safe environment for learning will promote

healthy physical and emotional development. At this age, children's play should be monitored by caregivers. Shock-absorbing materials should be established and maintained on all play surfaces (Moore et al. 115).

Early Childhood: Three to Five Years Old

ANTICIPATED DEVELOPMENT FOR AGES THREE TO FIVE

Physical

Runs safely. Can jump with feet together. Can stand on one leg and walk on tiptoe. Jumps, hops, and skips. Uses climbing frames well. Can steer around obstacles and corners while running and pushing toys. Can ride a bike or tricycle. Can forcibly kick a ball. Can cut with and hold scissors. Able to use technical equipment like computers. Can thread beads and manipulate clay. Can hammer (13-ounce steel shanked), soft wood, roofing nails, nailing block.

Intellectual

Beginning to show an understanding of past and present. Does not take turns well. Enjoys building with blocks, boxes, bricks, etc. Copies O, V, and T shapes. Matches colors and can name two or three. Draws a person with a head . Enjoys painting with fingers. Can count to ten. Listens quietly to stories and likes to hear them repeated. Reasoning is often illogical. Begins to classify objects and gain concept of number. At 5 yrs. realizes clock time has a relationship to daily routine of events.

Language

Uses pronouns and plurals. Initiates conversation with 'who?', 'what?', 'why?', 'where?'. Begins to change tone in sentence. New words picked up quickly. Tells long stories. Over-generalizes word endings.

Social

More cooperative. Enjoys helping adults with activities. Beginning to join in games, but needs to be in a small group. Has own sense of identity. Shows concern for others. By age four can take turns. Make-believe play is important. Talks freely to self and others.

Emotional

Emotional maturity evident in friendliness, sociability, and desire to please. Affectionate toward caregivers, siblings, and pets. Feels more secure to share and play with others– child may revert if in unfamiliar surroundings. Copies attitudes and moods of adults.

Figure 4.7

At age three, children are beginning to join playgroups and practice their language skills. They are capable of recognizing geometric shapes and understanding the use of numbers as they observe others using them. They are very social and will ask many questions. They will respond well when given choices, although open-ended questions should be avoided. Giving children the opportunity to make reasonable choices will instill in them a sense of confidence. Having them make decisions when they are given too many options can overwhelmed them and result in frustration. At three years of age children are more agile and coordinated, and are interested in playing and exploring outside. Activities that involve running, jumping, and balancing will be welcomed by three-year-olds. They comprehend the meaning of "on or under" and "bigger or smaller" (Bright Futures, "Goodbye," par. 1-4).

By four years old, children are struggling with verbal, social, and emotional confidence and can often be bossy and boastful. They exaggerate and have vivid imaginations. Four-year-olds need the opportunity to run and play and will play cooperatively with friends. They can walk on tiptoes, climb a ladder, ride a tricycle, count to ten, and match three or four primary colors (Bright Futures, "Growing," par. 2-3). As children reach the age of five they become more confident and have most likely improved their self-control. They are more capable of dealing with large groups and are ready for the learning experience of school (Sharman 149). Just as Piaget asserted, children at this age have the ability to pretend and symbolically represent things through language and drawing. They enjoy crafts, coloring and painting, and also may begin to enjoy simple board games. Five-year-olds engage in make-believe and dress-up play, and are likely to assume a specific role (fireman, teacher, etc.). By the end of their fifth year, children understand games that have rules. At this time in the child's life they are most likely in school and may be transitioning from make-believe play to an emphasis on organized games. In

Play and Child Development, Joel L. Frost suggests that as children gradually shift from make-believe they should be provided with the opportunity to play organized games like football, hopscotch, chase games, rough-and-tumble play, and exercise equipment (overhead apparatus—such as horizontal ladders and ring treks) (434). They can recognize simple words and may even be reading, and can draw a person with a head, body, arms, and legs. Children at this age also show a concern for their peers and parents, and are just beginning to perceive another's point of view (Bright Futures, "Leaving," par. 3-4).

Early Childhood: Six to Eight Years Old

ANTICIPATED DEVELOPMENT FOR AGES SIX TO EIGHT

Physical
At 6 yrs. begins to loose first teeth. Very agile. Climbs and balances well. Rides a two-wheeler bike. Able to use a bat and ball. Better coordination through 7 and 8 yrs. Good pencil control. Threads a large needle and sews. Draws well. Writing becomes more sophisticated.

Intellectual
At 6 yrs. easily distracted because of energy level. Aware of acceptable play and behaviors. Prefers rivalry games to team games.

Language
At 6 yrs. an incessant chatterer. Uses language to reason. Enjoys exciting stories being read. Reads to self more. Able to write stories for self.

Social
More cooperative. At 6 yrs. friendships dissolve rapidly. By 8 yrs. establishes a gang of friends. Enjoys helping adults with activities. Finds correction difficult to take. Content to play alone for long periods of time.

Emotional
Confident and independent. Decides to excel in everything undertaken. At 6 yrs.–less stable and moody, swings from love to hate. By 8 yrs.–good control of emotions. Has a growing sense of right and wrong. Absorbs more than gives out, appears quieter.

Figure 4.8

Although children's growth rate begins to slow at six years old, they are constantly on the go. Parents and caregivers should encourage outdoor exploration and activity. Establishing a precedent that outdoor play is fun can contribute to a child's future of good health. Given the opportunity and encouragement, children are likely to establish an appreciation for the outdoors. While creating a habit of exercise they will also find their curiosity satisfied in outdoor play. At six years of age, children are eager to act independently, but are not yet capable of making wise decisions. This is a good time for children to become involved in team sports, as Vygotsky's social cultural theory argues the zone of proximal development comes into play. At this point, children are beginning to learn specific sports skills like batting a ball or kicking a soccer ball. They are also able to comprehend rules and need to feel as if they are effective (Bright Futures, "Big," par. 1-5). Children at six years of age are becoming better at reading; by the age of seven they are reading to themselves and are extremely interested in words, like poetry.

According to Piaget, seven-year-olds are moving from the preoperational stage to the concrete operational stage. From learning to represent things symbolically to beginning to think logically about concrete events, children may feel confusion at times as they seek out new challenges. They enjoy experimenting and manipulating new materials. It is typical for children at this stage to use language to reason; however, they may shout out of frustration if they feel something is unfair. At this point their personality is well established. They continue to be very social and usually have a consistent group of friends that they spend time with (Sharman, 152-153). As children reach the age of eight, social connections are more important than ever.

Around age eight, children strive to feel part of a group. It is important for them to have a best friend and to feel part of a family and community. They are able to assume moderate responsibilities and they seek to perform jobs well. Creating chores for children during this time

will help them to organize their time and feel a sense of accomplishment. Physical growth is slow and steady. With an increase in control over small muscles they are able to draw and write with more skill. In addition to their physical development, they are beginning to fine-tune their intellectual, social, and emotional features. As a result, they seek friendships with children of the same sex and with similar interests and activities to relate to (Bright Futures, "Half-way," par. 1-5).

Middle Childhood to Early Adolescence: Nine to Thirteen Years Old

ANTICIPATED DEVELOPMENT FOR AGES NINE TO THIRTEEN

Physical

Children begin to "spread out" as their rate of development accelerates. Some begin to grow rapidly and mature early. Most girls first experience puberty between the ages of 9 and 13. Their body will build up fat in the stomach, buttocks, and legs. Their hips get wider and their waists get smaller. Boys experience puberty between 10 and 16. Boys gain weight, get taller, and their muscles increase in size.

Intellectual/ Language

Able to tell time. Is concerned about rules and fairness. Achievement in school is a high priority. Rapid brain growth results in increased cognitive abilities. Maturely and independently takes on problem-solving, organizing, and reasoning challenges. Adult-guided collaboration with peers builds skills in problem-solving. Diversity of peers and experiences is an important source of learning. Uses scientific reasoning. Able to think abstractly. Reads for pleasure.

Social

Has a sense of humor. Very social. Values others' opinions. Enjoys increased responsibility. Desires independence from parents. Highly influenced by peers. Enjoys activities, such as board games with peers and adults. May enjoy joining organized groups–religious, scouts, team sports, etc.

Emotional

Cares for self and property. Can take responsibility for chores. Aware of differences between self and others. May become self-conscious or anxious about these growth changes (too tall, too short, too fat, too thin). Is more concerned about what others think. Affectionate with parents. Able to manage behavior and emotions. Beginning to test roles and ascertain sense of self. Wants to be accepted and liked. Independent problem-solving and successful contributions to community builds self-esteem.

Figure 4.9

Children in middle childhood and early adolescence encounter more and more diverse people through school and social interactions with peers. Most children in this age range focus on their social life, friends, and school. As they spend less time at home, their friends are an important sources of learning and social support (Collins 2). Social comparisons can be a source of information children use to identify themselves and create a self concept. Dramatic physical changes are the hallmark of early adolescence. Physical changes are important to adolescents as they hope to develop like their peers (Bright Futures, "Declaration," par. 1-4). Throughout middle childhood and into early adolescence children are learning their limits. They need places to socialize and explore, and large spaces for vigorous body movement.

Healthy child development results from a diverse exposure of physical, intellectual, emotional, and social experiences. From these experiences the imagination is drawn. Imagination fuels play, the irreplaceable tool children use to process and internalize their experiences. The wonder of fruiting plants, learning the rules of a game, counting rows for seedlings, reaching the top of a climbing frame, listening to the wind in the trees, and experiencing the puzzle of a maze are all developmentally stimulating play experiences and can occur in every community. In this case, the information obtained about developmental milestones was used to design developmentally appropriate play zones throughout Eastwyck Village. The next chapter will introduce playground design. From historical playgrounds to current playground design, chapter 5 will explore the many possibilities for Eastwyck Village.

CHAPTER 5

CHILDREN'S PLAY ENVIRONMENTS IN THE UNITED STATES

FINDING PLAY IN WORK: PLAY IN THE UNITED STATES BEFORE THE 1900S

Colonial Americans struggled to survive. Every family member was needed to contribute to the survival of the family and community. Days were filled with the conquest of soil and forests, protection from Indians, building and repairing homes, obtaining food, and preparing meals (Rice 137). Communities were dependent on every individual's contribution. Life was dominated by work and religion. Highly influenced by Puritanical beliefs, community leaders enforced rules against leisure activities. Play was considered unproductive. Eventually, early Americans viewed idleness as evil and play a sin (Steiner 1). Although pursuit of activities for the intention of play alone was admonished, early colonial Americans found enjoyment in other aspects of their life. Farm life required that adults, as well as children, perform a variety of tasks. Tending livestock, picking berries, and harvesting crops were both work and play. Work at arts and crafts was also a necessity that brought creative work for all ages. Women's responsibilities included preparing the cloth, making clothes and home furnishings, and preparing meals. In addition to hunting and providing meat for their family, men had to construct their own tools and furniture (Rice 137).

Children helped with whatever they were capable of doing. Through work, children were first exposed to nature. In order to survive, children gained knowledge of the natural world. They quickly learned about the importance of seasons, crop regimens, wild vegetation, animals,

and their own existence in the cycle of life. Farm children milked cows, churned butter, fed chickens, collected eggs, cooked, cleaned, canned vegetables, built fires, scrubbed laundry, tended siblings, and much more (Clement 124). Young girls had to learn which plants were safe to eat, as they were often responsible for gathering berries. A young boy also had many responsibilities and skills. Shooting, trapping, and boating were both work and play. The tools for his trade were also his toys. Children found opportunities to engage in pleasurable activities and socialize as they worked. As Hamlin Garland recalls, in "Children's Play in American Autobiographies, 1820-1914" children found ways to "relieve the tedium" (Mergen 175). "The first toy a boy had in colonial America was something he would carry to his grave—a jackknife of the highest quality" (McCullagh 11). Monotonous tasks were often turned into play. Garland remembers his own experience of turning work into play.

> Garland, whose father made him plow the Iowa prairie ten hours a day when he was only ten years old, amused himself by whistling, singing, studying the clouds, and stopping occasionally to torment the lizards whose nests he disturbed. Mixed with the toil, Garland recalled, were the joys of the changing landscape, the songs of the birds, and the play of small animals in the fields (Mergen 175).

Early Americans, both young and old, frequently found enjoyment in nature and social interactions. Hunting and fishing were among the activities that were considered work, but were also appreciated for their social component. Cooperative labor eventually began to take on a recreational quality. Quilting parties, corn-huskings, house-raisings, and barn-raisings were celebrated. Settlements were often far apart and as travel was limited to foot, horse, or boat, social gatherings were especially valued. The need for craftsmen and farmers to market their products brought forth fairs. "Practically all the colonies except the strongly church-controlled ones of Massachusetts, New Hampshire, and Connecticut soon developed some forms of festivals, fairs, and pageants" (Rice 140). Wrestling matches, dances, and chasing greased pigs

were among the first amusements. The stern hand of the church was slowly losing its grip. Although strongly Puritan-ruled settlements were ardently opposed to leisure activities, others, especially the young, found many ways to amuse themselves. Marbles, leapfrog, hop-scotch, kite-flying, dancing around the Maypole, and fishing became common activities that survived to this day (Rice 140).

ALL WORK AND NO PLAY: CHILDREN'S LIVES DURING INDUSTRIALIZATION

Although early Americans were beginning to incorporate recreation into their daily lives, it would continue to occupy only a minute amount of Americans' lives until the early 1900s. Sixteen million men, women, and children arrived in the United States from 1850 to 1900 (Welch 66). By 1860 New York City exceeded one million residents (Welch 77). Immigrants came from many countries with unique experiences and personalities. When they arrived in the United States they all shared a common goal—to find work and support their families. This often meant every person in the family had to work, including children. In 1850, shortly after the start of industrialization in the United States, children accounted for 52% of the population, of which 41% were under the age of fifteen (Clement 1). Increased factory production of consumer items provided the opportunity to employ hundreds of children. To no surprise immigrant children were not the only children working. Throughout the eighteenth and nineteenth centuries a majority of Americans believed that by requiring their children to work they were preparing them for future employment (Clement 122).

Industrialization created large, complex businesses which resulted in the need for specialized services including engineers, accountants, lawyers, and architects. English speaking, educated, middle-class men filled these higher paying positions. A profound class division arose

as middle-class American men were able to support their families, reduce their working hours, and purchase large family homes outside of the city (Clement 4, 132). Middle-class children were encouraged to attend school so as to ensure their success in obtaining specialized work in the future. Children of working-class families had less and less in common with middle-class children. Despite the fact that middle-class Americans began to create an education-focused, safer life for their children, many working-class children continued to work in dangerous, dispiriting conditions.

Figure 5.1 Rhodes Mfg. Co., Lincolnton, NC. An eleven year old's momentary glimpse outside

Industrialization created hundreds of jobs, and as the lowest-paid laborers, children were working in factories, farms, mines, and various other manual labor jobs. It was not until 1870 that the United States government began to record children's employment. The United States census documented that one out of every eight children between the ages of ten and fifteen was employed. By 1900 that number increased to one in six children. According to United States

census records, that was approximately 1.75 million children earning wages (Clement 146). This number did not include the many children that worked in street trade, or domestic manufacturing. Children were often aware of their contribution to the family and frequently sought out jobs on their own (Clement 146).

Just as they had done in the past, young workers sought out sources of amusement. Surrounded by other children, an atmosphere of play arose in factories and mills. Children would make a game out of their work, and if caught would face harsh discipline from supervisors. As their chief indoor sport they would claim privilege of hanging onto the shafting belts as the machinery slowly started rising, riding towards the twenty-foot ceiling, or a "game of catch, with a ball improvised from yarn was [also] a very natural way in which to wish to spend one's time while waiting for the machines to fill…" (qtd. in Clement 140). Children worked long hours that unavoidably resulted in frequent accidents as children became sleepy and distracted. One child describes an accident she and her sister had while twisting flax: "You couldn't talk or look off a minute. My sister was just like me. She forgot and talked and just that minute her finger was off, and she didn't even cry till she picked it up" (qtd. in Clement 140).

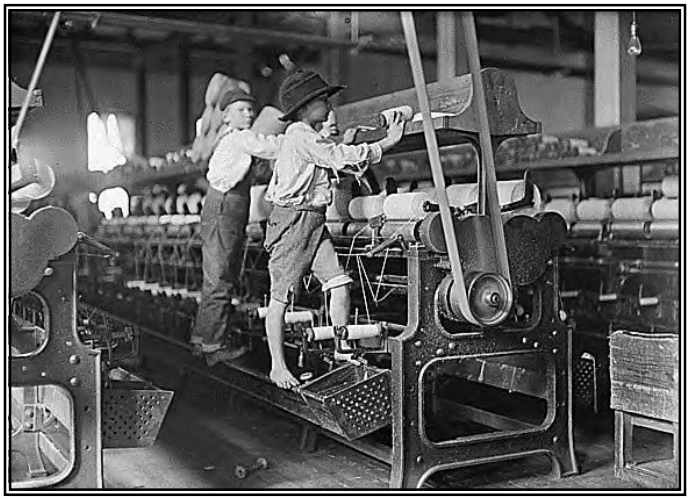


Figure 5.2 Macon, GA. Small children climb spinning frames to mend broken threads and replace bobbins

As a result of child deaths and injuries, middle class families began to condemn child labor. Despite this change in opinion, there were no enforced laws to protect youth born to poor, working-class families. Therefore, these children continued to spend much of their life in the factories, mines, lumberyards, and other workplaces. Whereas middle-class children had more free time to play in relatively safe surroundings, working-class children found little time to play. The few opportunities they did have were typically in the streets amidst gambling, prostitution, smoking, and drinking. Upper-middle-class women became increasingly interested in the frequent harm and neglect working-class children encountered. As a result, the day-nursery movement emerged. Boston Infant School was the first to open in 1828. Funded primarily by upper-middle-class women, day-nurseries were an attempt to provide physical safety with an emphasis on hygiene and sanitation (Turner 2). Although care began to be provided for children of poor mothers, children continued to work in order to contribute to their family's income. By the 1870s social reformers came in the form of college-educated men and women who believed change would come from living and "settling" with the poor. Settlement houses, as they came to be called, became places where social events occurred, local unions meetings were held, and neighborhood clinics and childcare were provided (Parker 13-15).

Figure 5.3 Hughes Town. Miners-breaker boys

By the late 1800s, Americans had become extremely worried about the harsh and dangerous working conditions and long hours to which youngsters were subjected. Motivated to protect American youth, Americans passed over sixteen hundred laws regulating the working conditions of children, and forbidding child labor. Although these new laws were established, child labor continued, as enforcement of these laws was virtually nonexistent. In 1904, the National Child Labor Committee (N.C.L.C) was organized by concerned citizens and politicians. Three years later it was chartered by Congress. Not until photographer Lewis W. Hine began investigating and documenting child labor for the N.C.L.C in 1908 were the dangers of working children publicly exposed. Capturing children's lives in factories, mills, and street professions, he also documented the effect adult experiences had on young working children (see figure 5.1-5.5). Many of the children he encountered smoked, drank and gambled. Hine's photographs inspired many Americans to support stricter enforcement of child labor laws.

Figure 5.4 Newsies smoking, St. Louis, MO.

Figure 5.5 Newsies playing craps in a jail alley at 10 p.m., Albany, N.Y.

Public opinion of child labor and safety ultimately forced the government to take responsibility of child welfare. Although sponsorship of child care began as private charitable aid by upper-middle-class women, by the early 1900s it had come to be recognized as social welfare. The government gradually began to fund child-care facilities. In 1938, Congress passed the Fair Labor Standards Act, which set a work week of forty hours, a minimum wage, prohibited children from working in hazardous employment, and restricted children ages fourteen and fifteen to employment that occurred outside of school hours and during vacations for limited hours (Hine).

The early 1900s would prove to be just the beginning of a quest to discover the best environment for children. As a result of the Fair Labor Standards Act, more and more children attended school and daycare, as most were prohibited to work. The awareness that children were the future of America and the need to provide appropriate child care inspired professionals in the 1920s. For the first time in the United States, professionals in academics, psychology, and sociology began scientific study in child development (Turner 3). Educators looked to child development theories to aid them in improving their classrooms. The task of improving the lives of children did not end with the classroom. Concerned with their moral development and seeking to improve their outdoor experience, widespread playground development began.

GYMNASTICS AND RECREATION

The Fair Labor Standards Act had a significant impact on Americans involvement in physical education and recreation. However, it was many years earlier that physical education began to creep into American culture. Benjamin Franklin was America's first recorded promoter of physical education in the 1700s. Despite Franklin's support, it was not until 1824 that

physical education programs in schools began (Rice 145-148). Three German teachers introduced the Turner movement of gymnastics. Charles Follen, Charles Beck, and Francis Lieber studied Friederich Ludwig Jahn's theory known as the Turner movement and interpreted his philosophy of "freedom of action and individual effort" through gymnastics (Rice 71). Balance beams, vertical ropes, ladders, and horizontal bars were staples of gymnastics apparatus; as gymnastics became more popular, exercise grounds increasingly accompanied such equipment. Jahn taught in Germany and believed that great values were derived from gymnastics, wrestling, running, and jumping. "Jahn's faith and work in physical education originated from patriotic motives. He believed that the hope of German freedom lay in the development of strong, sturdy, and fearless youths and that the continuance of Germany's greatness rested on the vigorous minds of the next generation" (Rice 72). Having been less than fifty years prior, the Revolutionary War was fresh in Americans' minds. Americans readily accepted the teachings of Jahn through Beck, Follen, and Lieber. Beck fled Germany and subsequently became headmaster of Round Hill School**.** Round Hill School was the first school in the United States to incorporate gymnastics into the school program. After teaching at the Boston Gymnasium, Follen succeeded Beck at Round Hill School. Lieber took over Follen's teaching position at the Boston Gymnasium and created America's first swimming school. As gymnastics and physical recreation grew in popularity, physical education was implemented in schools and children were encouraged to engage in recreation. In increasing numbers, schools installed formal playground equipment using similar equipment found at gymnasiums (Rice 163-172). Reduced working hours increased the opportunity for many Americans to begin outdoor recreation, and as the trend toward exercise continued, Americans looked for places to play and exercise.

FOR THE HEALTH OF THE PEOPLE: A PUBLIC PARK

Figure 5.6 Rest and recreation in Central Park

Figure 5.7 Taking a stroll in Central Park

As Americans began pursuing ways to spend their leisure time, they also began to realize that nature was being replaced by tall buildings and crowded cities. Herbert Hoover was one of many that celebrated the growth of the United States, yet encouraged recreation and an appreciation for our natural environment. Hoover was concerned that children were "separated from Mother Earth and all her works" (Hoover 35-36). Hoover's response to urban growth and the loss of the natural environment was a sentiment shared by others at the time. The Boston Post declared: "A public park is now a great necessity and not an expensive luxury. It is the property of the people, rich and poor together, and the only place where all classes can daily meet one another face to face in a spirit of fraternal recreation" (qtd. in Hardy 68). Aware that the growth in New York City was limiting space, the city's mayor set aside 850 acres of land for the first city park in 1853 (Carlson 31). In 1857-58 Frederick Law Olmsted and his partner Calvert Vaux designed Central Park.

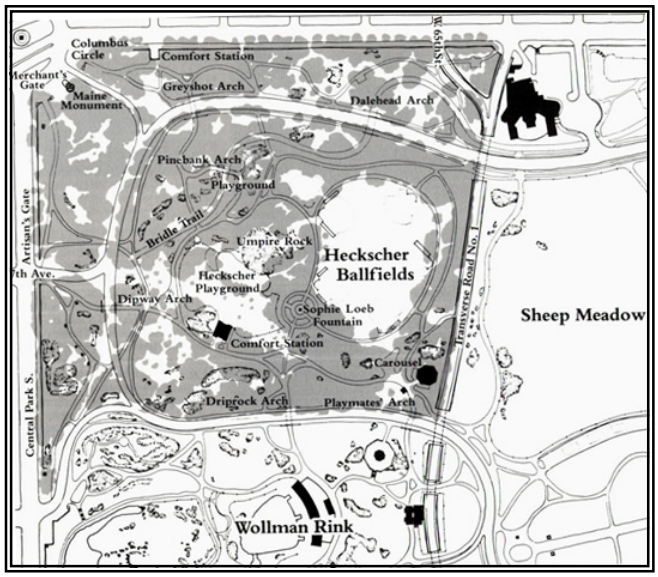


Figure 5.8 Southwest corner of Central Park, skating rink, two play fields, carousel, ballfield, etc.

Figure 5.9 Heckscher Playground, wading pool, 1927

Figure 5.10 Aerial view of southwest corner

Central Park was created to provide for the mental, physical, and spiritual health of urban dwellers. It was the first large park specifically designed for use by the public. Designed in a 'naturalistic' landscape, Central Park consisted of meadow, parkland, and woodland (Rogers 7). A lake, sheep meadow, and play spaces were included in the park's original design (Olmsted 228). Designated play areas consisted of open meadows used for various kinds of recreation and games. Park visitors could be found playing lawn tennis or tug-of-war, strolling, and attending public gatherings (see figure 5.6). Ice-skating and boating were common activities on the lake. The southwest corner of Central Park was designed specifically with children in mind. In addition to the playgrounds, a carousel, and dairy, Olmsted used names like "Playmates Arch" and included comfort stations within steps of the playgrounds.

Influenced by the playground movement, Heckscher Playground was established in 1927. A portion of the meadow area in the southwest corner was transformed into a playground with a wading pool and play equipment. By 1934, five softball fields, four handball courts, and a horseshoe-pitching area replaced the remaining meadow (Rogers 140-142). In addition to Olmsted's contribution of Central Park, he raised public awareness of the need for green-space through lectures, reports, and by example. He created public gardens, city squares, public and private gardens, and the creation of wilderness preserves (Wurman 6). Many, like Olmsted, believed that parks were an attractive remedy for the discontent among city dwellers. They provided social tranquility and scenic beauty, and offered Americans a place in the city to find fresh air (Hardy 66). Olmsted advocated enlarging education beyond "miserable common schools" in order to raise the cultural level. He suggested that "parks, gardens, music, dancing schools, [and] reunions will be so attractive as to force into contact the good and bad, the gentlemanly and the rowdy" (qtd. in Beveridge 19-20).

A PLACE TO PLAY: THE FIRST ORGANIZED PLAYGROUNDS

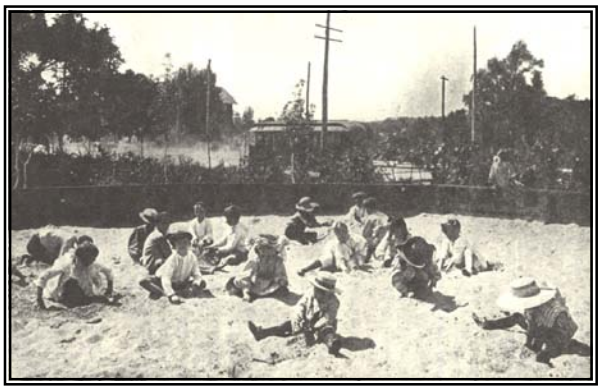


Figure 5.11 Suburban sand garden

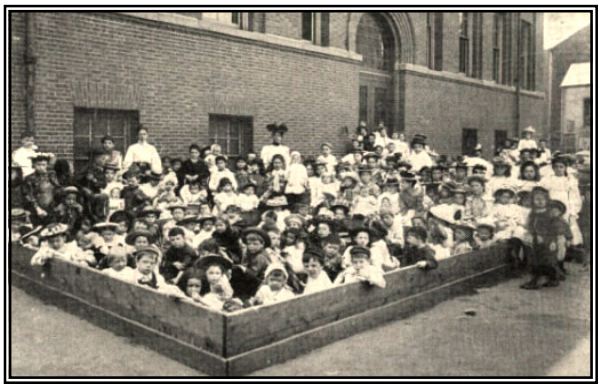


Figure 5.12 Early sand garden, Boston

In crowded cities, industrialization had created urban environments with little room for child's play. Although day nurseries and schools were beginning to attend to the needs of young children, older children could often be found in pool halls, saloons, and brothels gambling, Smoking, and drinking. Play was unsupervised and dangerous, as it consisted of games where children played with sticks and balls, marbles, and tops in busy streets. "Play organizers argued that the moral and social lessons implicit in these games were lost if left to the vagaries and 'anarchy' of the street" (Cavallo 25). As Olmsted and Vaux designed Central Park for "innocent amusements and open-air pleasures," (Hardy 70) advocates for the moral development of children were preparing to develop the first organized playground. In the 1880s, after observing children in Germany playing in sand gardens, Dr. Marie Zakerzewska returned to the United States and recommended that the Massachusetts Emergency and Hygiene Association create large sandboxes made of wood as an approach to getting children off the streets. The first sand garden was built in the Parmenter Street Chapel and West End Nursery in Boston in 1885.

Two years later ten sand gardens had been built (Eriksen 9). Supported by modern psychological theories of development, play advocates claimed that playground experiences were means through which children develop cognitively, socially, and morally.

By 1891 the New York Society of Parks and Playgrounds had built the first playground on the Upper East Side. In addition to sandboxes, however, these playgrounds were equipped with small wagons, wheelbarrows, shovels, swings, seesaws, footballs, and other equipment. The playgrounds also shared other similar characteristics; they were located in densely populated sections of cities, they were created for young children, and they contained equipment only suitable for outdoor use. Typically these playgrounds consisted of a ball-playing area and a hard-surfaced area with commercially manufactured or homemade equipment for physical exercise. Philadelphia in 1893, Chicago in 1894, and Detroit in 1899 would be among the first to follow Boston's example of alternative play environments for children (Eriksen 8-10).

In support of public recreation Jane Addams asserted that " amusement is stronger than vice" (Eriksen 9-10). Addams and Ellen Gates Starr established a settlement house, called Hull House, that was intended to serve the working-class people of Chicago. In 1892 Addams acquired the land that surrounded Hull House. Two years later she supported the construction of a playground in this location. It was intended to be a model playground for others to follow. Planners for the Hull House playground attempted to provide activities and equipment that would attract children. Previous playgrounds were supervised and only open during summer vacations. Hull House playground was the first to be opened year round and provide supervision that was meant to have an educational emphasis (Carlson 36).

Founded in 1906, the Playground Association of America named President Roosevelt its honorary president. Through Roosevelt's influence, and the support of social reformers like Jane

Addams, the association sought to motivate government agencies to create public recreation facilities with minimum standards throughout the nation. Prior to the work of the association, some but not all municipalities contributed to the funding of playgrounds. There was not an established system in which funds were set aside for the property and construction of public playgrounds. The association was successful in changing this. "Between 1880 and 1920, municipal governments spent over one hundred million dollars for the construction and staffing of organized playgrounds" (Cavallo 2). When the association was founded, there were only twenty or so cities that had public playgrounds. Ten years later, recreational facilities were found in 500 to 600 cities many of them located on school sites or at community centers.

Figure 5.13 Late 1800s early 1900s, typical playgrounds

Americans began to view the implementation of recreational facilities as a benefit to the welfare of all citizens. In addition to the funding of child care programs, the government began funding recreational facilities. The task of constructing and maintaining playgrounds had shifted from social reformers and private donors to publicly funded, government controlled agencies. With the coming of World War II, and World War I still on Americans' minds, there developed a

nation concerned with physical fitness, and ideals of loyalty and cooperation. Self-guided free play was discouraged, while emphasis was placed on organized competitive sports and gymnastics (Eriksen 11-14). By 1930, the association had shifted its focus and changed its name to the National Recreation Association.

Figure 5.14 Gymnastics influence

Although the result of government owned and operated playground facilities resulted in the institutionalization of uniform playground design, the National Recreation Society recommended against uniformity. In Playgrounds: Their Administration and Operation (1936), the association stated, "Every playground should be designed to serve the particular needs of the neighborhood in which it is located and to utilize to the utmost the possibilities which the site offers for an effective and individual type of development. Standardization in playground design and features should be avoided" (10). Active games and sports, social activities, arts and crafts, music, dancing, dramatics, nature activities, collecting (leaves, insects, flowers, etc.), and service (coaching, beautification and clean-up, tutor programs, etc.) were all suggested by the association in 1936. Although some examples, like the game of Shinny, are outdated, many of the activities can still be found today in practical guides promoting recreational activities for children. Unfortunately, many of the activities and essential features suggested by the association, including employing a play leader to facilitate a plethora of activities, have not endured time and governmental funding.

A FOCUS ON DESIGN AND TRANSFORMATION OF FORM

Manufactured Playgrounds

Early in the 1900s manufacturers seized the opportunity to stock playgrounds with apparatus; as a result, heavy-duty steel and wood equipment were seen on most playgrounds throughout the United States until the 1950s. It was not until the 1950s and 1960s that Americans began to see a transformation in the appearance of their playgrounds. Perhaps motivated by criticisms of traditional playgrounds (considered drab and barren), or the correlation of play and child development findings, manufacturers once again took advantage of the opportunity to provide equipment for playgrounds. Recognized as the "novelty" era, manufacturers constructed concrete play structures from everyday, futuristic, and abstract forms (Frost 123-127). The intention was to inspire imaginative play; however, the forms were anything but inspiring. The fixed, lifeless structures were resistant to change, movement, and action by children. The novelty era was short lived as the designs were found to be more interesting to adults than children, and was soon followed by themed playgrounds. By the early 1960s, nautical, "Dennis the Menace," and western themes had all been used in playground designs. Exercise equipment (parallel bars, ladders, etc.) continued to be made of steel, whereas play equipment was beginning to see a change in material (wood and plastic animal-type swings). Previously, play equipment was constructed of steel or concrete. Plastic was beginning to be incorporated into playgrounds as it provided color and variety. Throughout the fifties and sixties designers appear to have been trying to put life into playgrounds. Climbing structures, slides, swings, and seesaws were all designed to resemble rockets, ponies, turtles, or other functional objects or creatures (Frost 125-127).

Adventure Playgrounds

Playgrounds began developing in Europe at about the same time they began in the United States, and in some ways resembled the traditional American playground. Typically, they had gravel surfaces of open space for group activities, and trees, shrubs, and equipment located along the edges. Throughout the years, several movements influenced playground design. Mentioned before, the gymnastic movement, which was strongest in Sweden and Germany, led to playground designers incorporating balance beams, vertical ropes, ladders, and parallel bars to the standard play equipment. In 1866, the manual training movement found its influence in Europe. The movement brought interest in woodworking, crafts, and other domestic handiwork and as a result was introduced into Finish schools (Eriksen 17). The manual training movement captured important elements of child development—physical stimulation through manual labor, intellectual stimulation through planning and creating, and emotional stimulation through the satisfaction of accomplishment. Although the manual training movement had little influence in the design of traditional playgrounds, it would influence a new perspective in children's playgrounds—adventure playgrounds.

In 1943, C. Th. Sorensen noticed that children seemed to prefer playing in the streets, even when they were steps away from a beautifully landscaped traditional playground. Their love of freedom to take calculated risks with an ever changing environment inspired Sorensen to start Emdrup, the first adventure playground located outside of Copenhagen in Denmark. Sorensen thought that children should be free from adult supervision to the greatest possible extent. He acknowledged the importance of guidance, but warned against too much interference in the activities of children (Allen 53). There are many adventure playgrounds in Europe today. Just as it was when the first adventure playground began, most of them have a trained leader.

The leader is not a disciplinarian. His or her role is to move around the playground watching the children work, never directing, but occasionally making suggestions, perhaps about the right tools or equipment, and opening up new avenues of exploration (Bengtsson 54). The leader is guided by the imagination or activities of the children. Children playing at adventure playgrounds can be found participating in many of the same activities early colonial children experienced—creating structures from wood using hammers, nails, and saws, digging with shovels, learning about fire and creating fire pits, climbing, reading, gardening, taking care of animals, jumping, running, and swinging. Every experience at an adventure playground is initiated by the imagination of a child. The adults who support adventure playgrounds value the experiences and education that adventure playgrounds provide. Although there have been playgrounds in the United States that have been called adventure playgrounds, few of them represent the original concept at Emdrup.

Figures 5.15 Example of Americanized adventure playground design

Figures 5.16 Example of Americanized adventure playground design

The original adventure playgrounds have received little support in the United States. Aesthetic disapproval and fear of injury (and lawsuit) by adults appear to be the cause. In 1974, Nancy Rudolph, a recreation consultant and director of New York Citizen's Committee for Children, published Workyards: Playgrounds Planned for Adventure. According to Rudolph, what has come to be thought of in the United States as adventure playgrounds are usually playgrounds designed and built by architects. Unlike the original adventure playground, the play area dictates the type of play by the design of the architect (see figures 5.15 and 5.16). Therefore, Rudolph differentiates these American adventure playgrounds from the original concept of adventure playgrounds by renaming the latter workyards (9). She favors workyards, admiring the original concept of adventure playgrounds. Agreeing with developmental psychologists of the time, Rudolph acknowledges the growth that occurs through play. "Theoretically, adventure playgrounds are places where children are given free rein to develop their abilities" (Rudolph 9).

Workyards resemble the original concept of adventure playgrounds (see figures 5.17-5.18). They require at least a third of an acre, materials to build with (hammers, nails, rulers, pliers, sand, wood, etc.), screening or barriers (fence, plants material, etc.), and a building for storage. In addition, one of the most important elements of a workyard is the presence of a play leader and the support of the community. Play leaders are often paid a small weekly salary by the contributions of families using the workyard. The play leader is chosen by the community. Rudolph maintains that workyards are an asset to any community, citing that where workyards exist vandalism decreases, because children channel their energies and express themselves in acceptable, constructive behaviors (60).

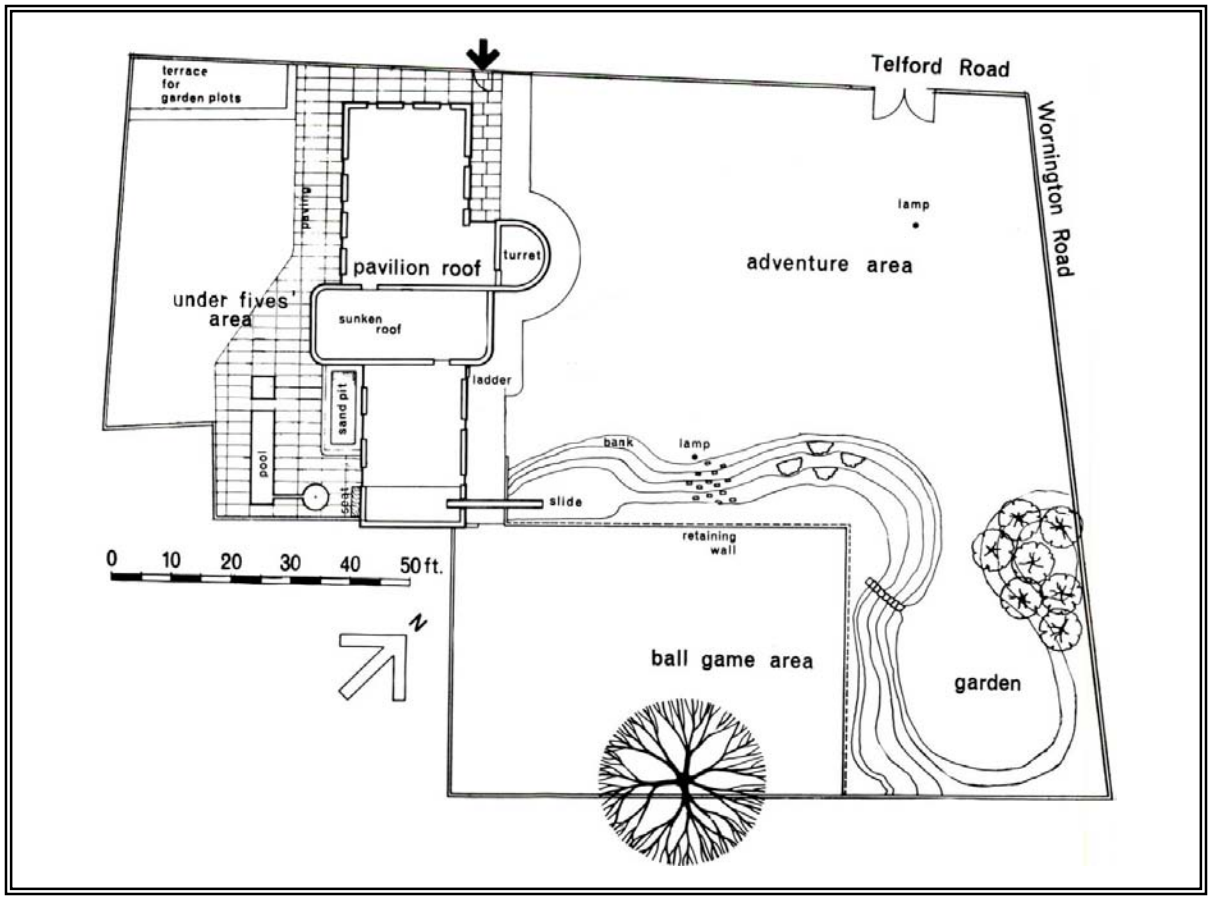
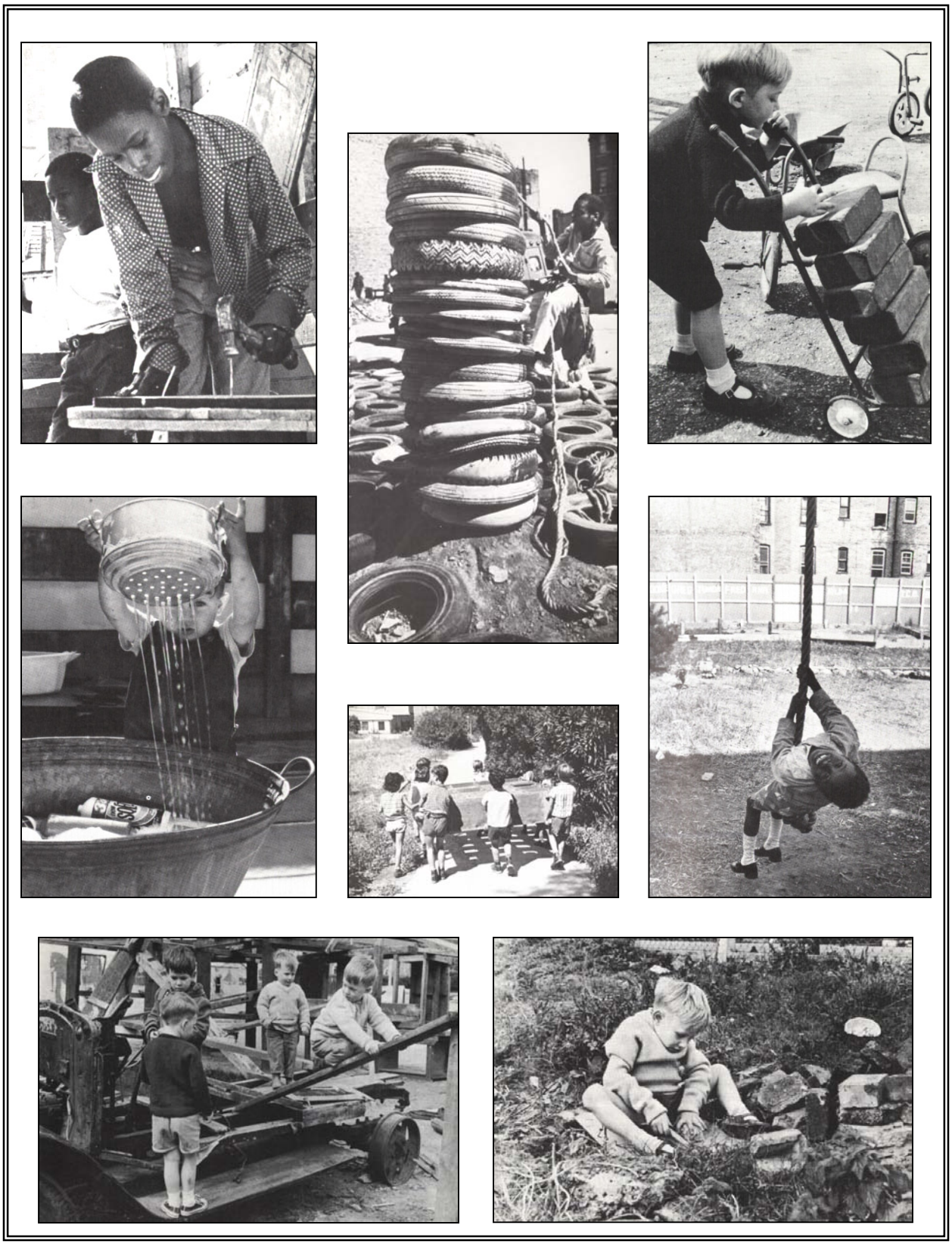


Figure 5.17 Notting Hill, London. Typical adventure playground plan



Figures 5.18 Adventure playgrounds/workyards inspire cooperation, independence, confidence, learning, and fun

Contemporary Playgrounds

As adventure playgrounds were gaining interest in Europe, playground designers sought ways to satisfy the developmental needs of children while also designing playgrounds that complimented the environment for which they were built. In the early 1960s, designers began using natural and recycled materials (wood, stone, railroad ties, etc.) in an effort to blend in with the environment (Scarlett 170). Landscape architect M. Paul Friedberg and architect Richard Dattner are know for their contribution to contemporary playground design. Both designers advocated a complexity of design in hardscape, developmentally challenging play environments, and adventure playgrounds. Known for his design of Jacob Riis Plaza, Friedberg modeled "link play." Through natural and constructed elements he linked various types of play—promoting a diversity of play experiences. His designs included sand, recycled granite blocks, trees, metal pipes, grass, and timbers. He used metal pipe equipment set in asphalt to create the

Figures 5.19 Jacob Riis Plaza

Figures 5.20 Jacob Riis Plaza, linked play

experience of mountains, tunnels, and tree houses (Brett 34). Friedberg focused a great deal of his work on small, urban playgrounds. He noticed that vacant lots could be used for children's play which would otherwise be left to the streets. He proposed "moveable" playgrounds—playgrounds made of prefabricated equipment that could be dismantled and moved. Friedberg was ultimately responsible for pioneering modular play, which began as pieces he created from large timbers that could be combined and re-combined to form play structures (Crowder 20). Figure 5.21 illustrates Friedberg's concept of a modular timber structure.

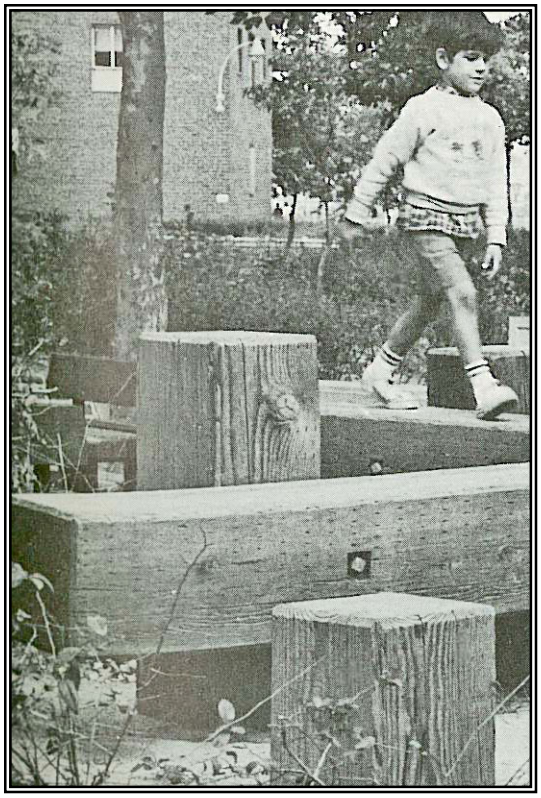


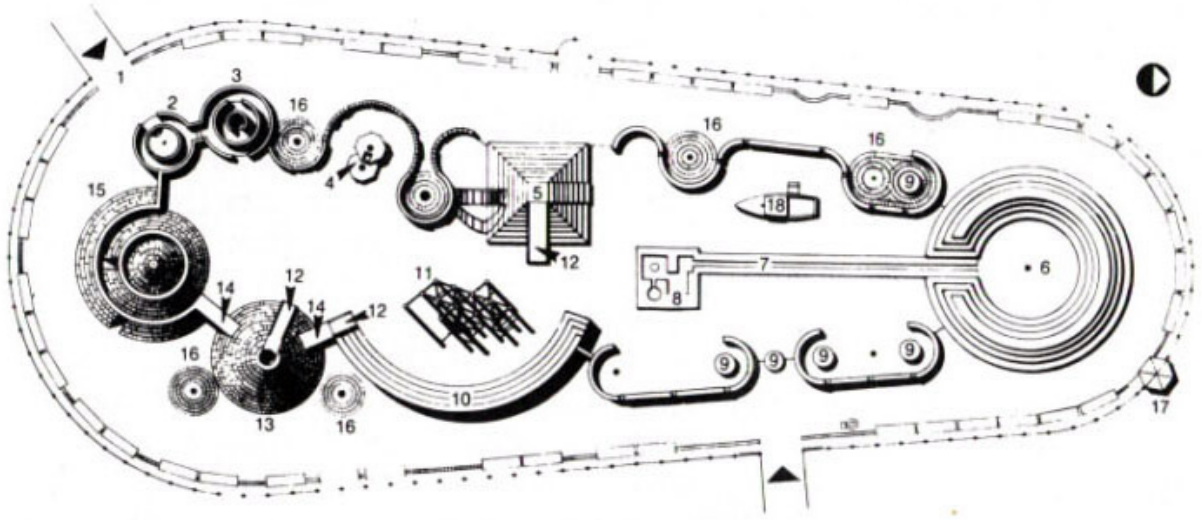
Figure 5.21 Modular-linked play

Sharing Friedberg's interest in combining aspects of the natural and constructed environment, Dattner created the Adventure Playground in Central Park in 1966. Rudolph would most likely associate Dattner's playground as an Americanized adventure playground. Although Dattner borrowed elements from adventure playground design, his Adventure Playground in Central Park is far too tidy and designed to be considered a true adventure playground (Eriksen 34-36). Dattner's playground was impressive for the time, because of the developmental opportunities afforded to children. Situated on the west side of Central Park the playground is surrounded by expanses of grass and trees. Within the playground, concrete and stone create a variety of play spaces, including a large pyramid for climbing and sliding. Various developmental needs are provided for through the inclusion of treehouses, a maze, splashing and

wading pools connected by a water channel, safe slides, tunnels, and other equipment all on a sand base (see figure 5.18). Children are given the opportunity to manipulate their environment in areas developed for digging, building, painting, and so on (Crowder 20). Due to the expense of Dattner's expansive design, few playgrounds have attempted to replicate his Adventure Playground in Central Park.

Plan of the playground

1 entrance
2 entrance tower
3 maze
4 treehouses
5 pyramid
6 splashing pool
7 water channel
8 wading pools
9 table
10 amphitheater
11 climbing poles
12 slide
13 volcano
14 tunnel
15 concentric mounds (crater)
16 tree pit
17 tool shed
18 boat (not installed)



Figures 5.22 Adventure Playground in Central Park

NATURE'S PLAYGROUND: BACK TO PICKING BERRIES

Preceded by environmentalists Henry David Thoreau, John Muir, and Aldo Leopold, environmentalist Rachel Carson alerted Americans to the dangers of pesticide use. A movement that can be said to have begun as early as 1845, the environmental movement quickly began to gain support. Demonstrated in the early 1960s by Friedberg and Dattner's use of natural and recycled materials, Americans were becoming responsive to environmental issues. Carson's Silent Spring contributed to the general public's awareness of environmental issues effecting humans. Two years later, in 1964, the United States established a process for "permanently protecting some lands for development" by passing the Wilderness Act (Weiss, par. 30-31). By 1969, the National Environmental Policy Act passed and the Environmental Protection Agency was created. This was the first major U.S. environmental legislation (Weiss, par. 31-42). Concern for the environment was becoming a part of public consciousness. In "A History of the American Environmental Movement," Weiss quotes Congress as stating "that it is the continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans" (Weiss, par. 35).

Likely sparked by the environmental movement, in the early 1970s designers began to reconsider nature's role in children's environments. The playground movement first began as child advocates sought ways to promote the general welfare of children. From health and sanitation to developmentally appropriate designer playgrounds, the playground movement saw

many changes. As the movement grew, designers readily offered new models of playground design. Although some considered contemporary playgrounds more aesthetically pleasing than its predecessors (Scarlett 168), contemporary playgrounds quickly gave way to another era of playground design. Over one hundred years later, the playground movement found itself back where it began. Reminiscent of Olmsted's desire to bring nature to urban communities through gardens, water features, meadows, woodland, and dairy, designers in the early 1970s attempted to provide opportunities for children to once again connect and learn from nature.

CHAPTER 6

HEALTHY CHILDREN THROUGH ENVIRONMENTAL STEWARDSHIP: CASE STUDIES

Playgrounds first began as a solution to the adverse city conditions brought about by industrialization and urbanization. Throughout the life of the playground movement, advocates for playgrounds have sought to provide for the health, safety, and development of children. By the 1970s Americans were concerned that many children had little understanding or appreciation of nature and its role in their lives. Advocates for the use of natural resources as a means to foster play argued that the outdoors already has the key ingredients for play. Early playgrounds, often described as barren, did not reflect this sentiment. As designers worked to introduce nature back into the lives of children, they began to collaborate with educators who saw the value in incorporating nature into children's daily lives. Physical, intellectual, language, social, and emotional development is stimulated in outdoor settings through sensory interactions with the environment, and through social interactions with peers and mentors (see chapter 4).

This chapter highlights two case studies: Washington Elementary School Environmental Yard and Oakhurst Community Garden. Each of these sites has experienced a transformation that was guided by the desire to provide children with the opportunity to connect, learn, and grow. The renovation at Washington Elementary School offers insight into the successful application of design principles applied by Robin Moore. Oakhurst Community Garden is located a short distance from Eastwyck Village and was guided primarily by the community. It

too has a strong environmental education emphasis with programs that focus on community building, cultural awareness, and environmental and personal health. On a quest to provide their children with safe, socially valuable playspaces, Eastwyck Village is just beginning on its own path of transformation and renewal.

CASE STUDY #1: LEARNING FROM NATURE: SCHOOL YARD HABITATS

It was only a matter of time before designers and educators came together to focus their attention on the place children spend a majority of their time—school grounds. School grounds are expected to have play areas, places to conduct physical exercise and sports, and often serve as community parks outside of school hours (Mason 48). Beginning in the early 1970s, designers began working with schools to renovate schoolyards from bleak asphalt surroundings to environments rich in diverse play and learning opportunities. One of the first examples of these renovated school grounds was at Washington Elementary School, a University of Berkeley lab school dedicated to developing and demonstrating new curricular methods (Moore, Natural xv). In 1971, with the support of UC Berkeley School of Education and the Berkeley Unified School District, Robin Moore and Herb Wong began the process of redeveloping the urban school yard of Washington Elementary.

Washington Elementary's school grounds consisted of an acre-and-a-half expanse of asphalt surrounded by a tall chain-link fence. Neighboring apartment buildings were the only source of shade, and constant traffic along Martin Luther King Jr. Way created a hostile environment (Moore, Natural 4). In the early 1970s, more than twenty thousand cars passed Washington Elementary's yard per day (Moore, Natural 4). Children complained of the heat and the "plain cement" (Moore, Natural 5). "Most recess periods saw at least one serious fight

among the boys. The physical surroundings were so boring and unresponsive that petty squabbles and relentless teasing were the only diversions" (Moore, Natural 5).

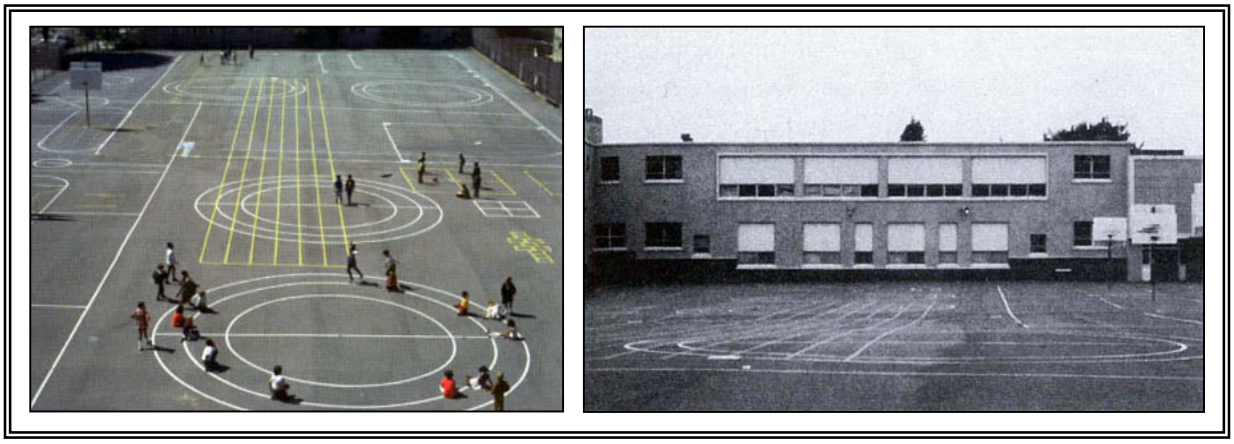
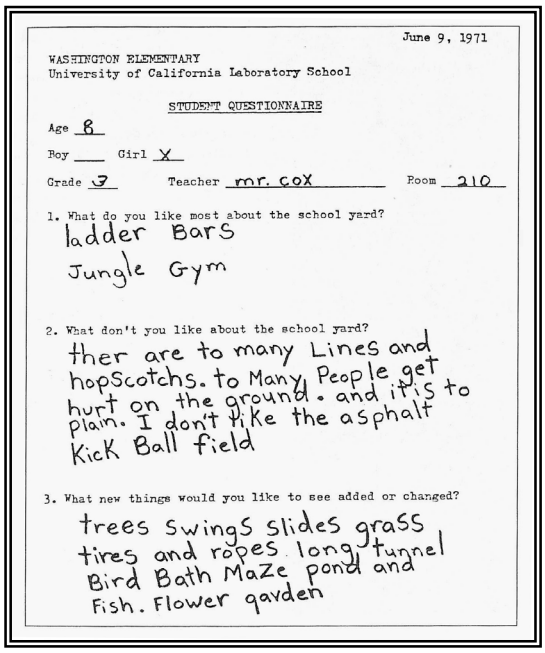


Figure 6.1 Washington Elementary School

Unlike many designed environments for children, Washington Environmental Yard enlisted the assistance of the children from the school and the community. Community participation with both children and adults was an essential element in the initial design process and construction, and continues today through the Yard's many changes. Prior to the demolition of the asphalt schoolyard in 1972, surveys, workshops, classroom exercises, and community events revealed the overwhelming support for the inclusion of nature. One classroom evaluated which design elements were most desired through consensus. They created a demand chart as each student voted on their top five most desired design features. See figure 6.4. Similar to Eastwyck Village's youth, students overwhelmingly voted for water (swimming pool) as a desired addition (Moore, Natural 230). After receiving input from the community, teachers, and faculty, Moore proposed a master plan.



June 9, 1971

WASHINGTON ELEMENTARY
University of California Laboratory School

STUDENT QUESTIONNAIRE

Age 8

Boy ___ Girl X

Grade 3 Teacher mr. cox Room 210

1. What do you like most about the school yard?
ladder Bars
Jungle Gym

2. What don't you like about the school yard?
ther are to many Lines and hopScotchs. to Many People get hurt on the ground. and it is to plain. I don't like the asphalt Kick Ball field

3. What new things would you like to see added or changed?
trees swings slides grass tires and ropes long tunnel Bird Bath Maze pond and Fish. Flower gavden

Figure 6.2 Survey—all possible users were involved in the planning process

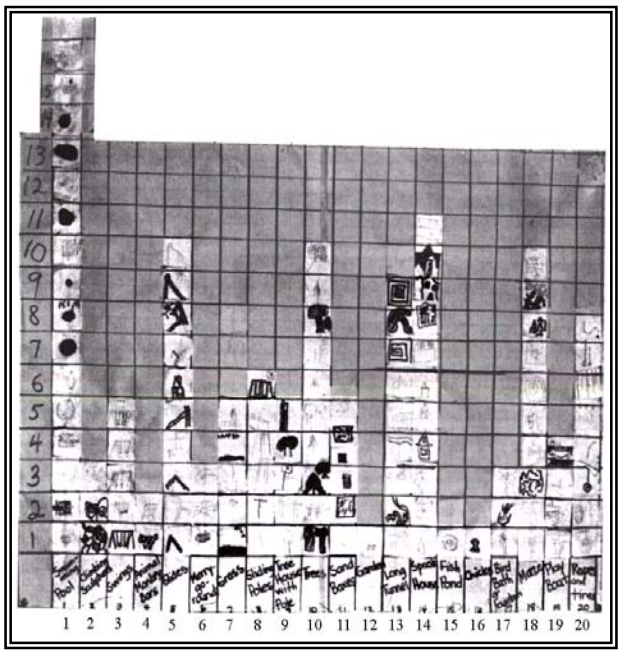


Figure 6.3 Demand chart's highest number of votes: 1. Pool, 14. House, 5. Slides, 10. Trees, 18. Maze, 13. Long Tunnel

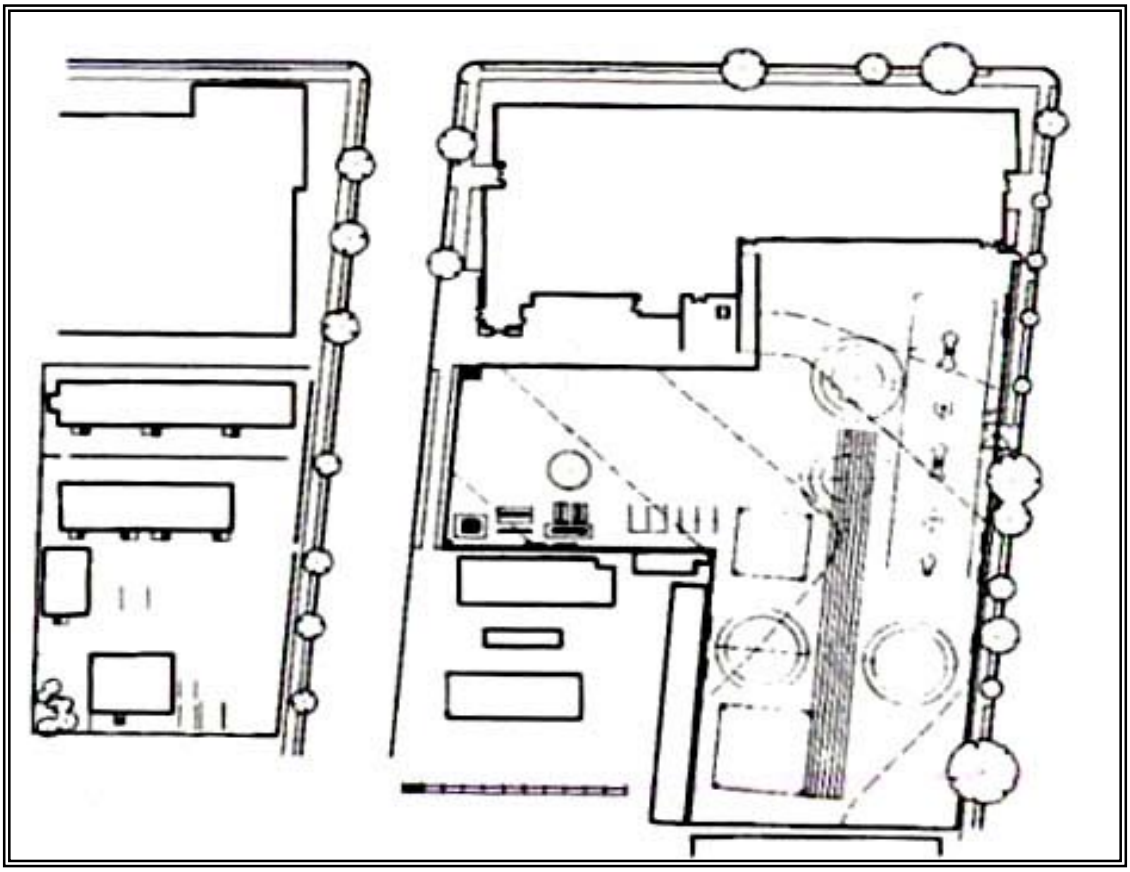


Figure 6.4 The Yard plan before development

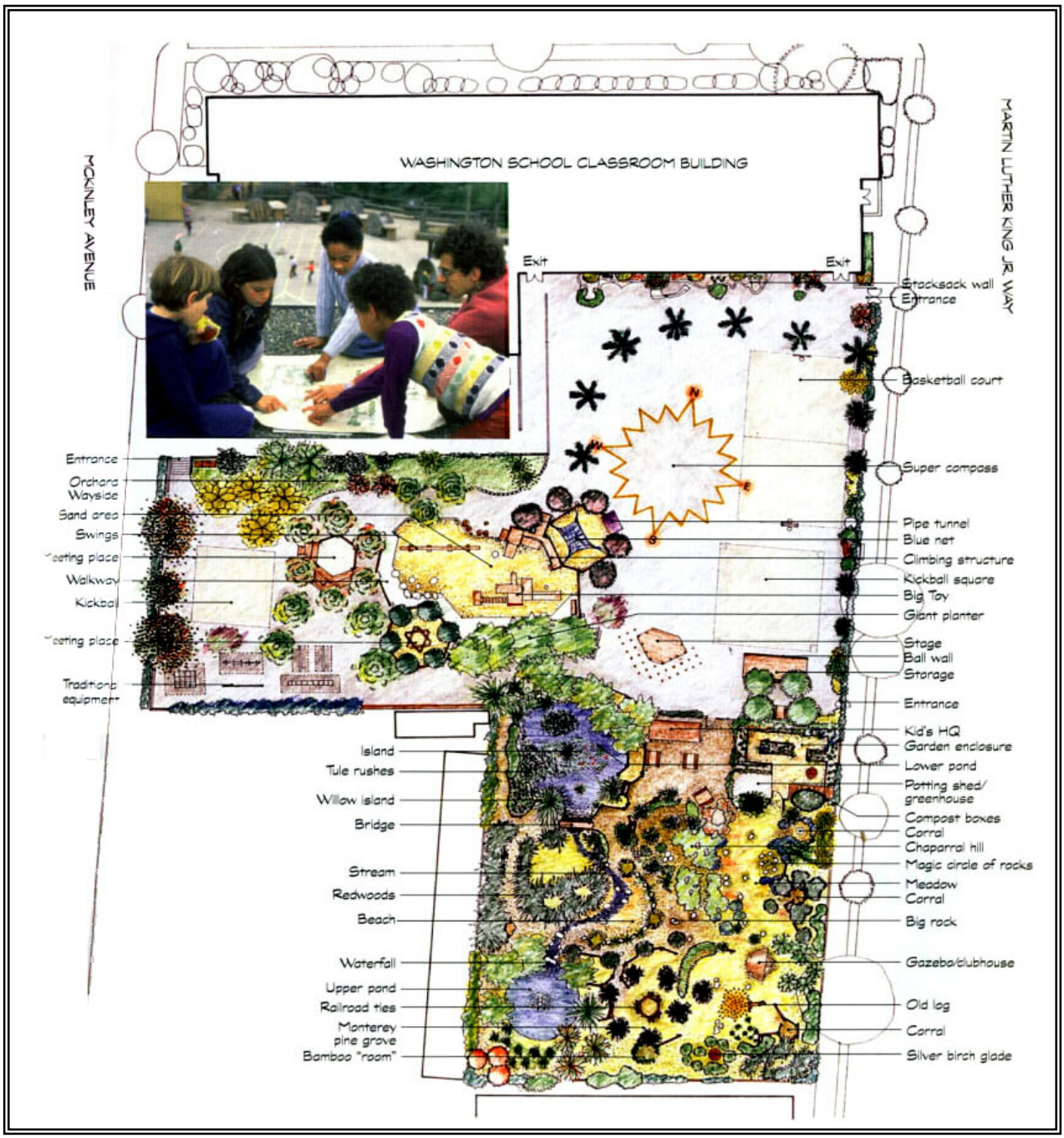


Figure 6.5
Environmental Yard
Master Plan

Figure 6.6 Yard demolition

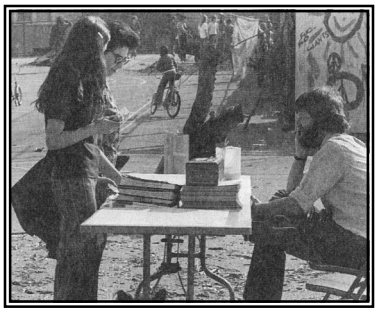


Figure 6.7 Youth participation

Design Elements

Ultimately, three diverse spaces were implemented into the design proposed by the children. One area, which already existed at Washington Elementary, consisted of asphalt for ball games, horizontal bars, and a jungle gym. The second area contained conventional play equipment (slides, swings, climbing structures, etc.). Lastly, the children proposed the Natural Resource Area, a natural setting of trees, flowers, water, birds, fish, etc. (Moore, Before 192). The Natural Resource Area evolved over time, and soon accommodated a series of mini-ecosystems that reflected the San Francisco Bay region—wetland, stream, riparian woodland, redwood grove, meadow, and chaparral were included (Moore, Before 191). According to Moore, "the more diverse the environment, the broader the range of curricular options" (Moore, Natural 242).

Figure 6.8 Nature inspires writing

Figure 6.9 Composting

Two ponds, a small stream, a waterfall, climbing structures, clubhouse, swings, slides, learning stations, sand area, and garden were available at the Environmental Yard. Children were too busy to be starting fights in the school yard. Injuries and accidents decreased as children became more involved in the activities of the Environmental Yard. During school

hours various subjects were taught in the Natural Resource Area. In the garden, children learned about composting and the role worms have in the process. The wetland lent itself to various studies about snakes, frogs, and turtles (Moore, Natural 46). In addition to supplying a multitude of learning opportunities, the Natural Resource Area also provided an inspiration for creativity and imagination. Spying, hiding, and fantasy play often occurred around the meadow, pond area, among the redwoods, and in the bamboo. Rooms created by vegetation allowed for privacy from other games. It was in these places that dramatic play evolved, and clubs were formed. Rocks, logs, or plantings were positioned in such a way that they created rooms or provided edge to a space and resulted in seating for an audience, or a resting place.

Figure 6.10 A resting spot on the playground

According to Moore, in addition to appreciating the value of natural play, it is important to recognize the societal influences and values that contribute to children's interest in traditional games and playground features (Moore, Natural 95). Conventional play equipment is familiar, and perceived as safe by most children. Sliding and swinging in the main yard was a frequent activity for the children. It was here that they were able to interact with gravity and engage in physical activity. Some children revealed that the swings were a good place to play when they

were alone (Moore, Natural 95). Kickball remained a favorite game to play in the main yard, especially after a flowing, raised planter was installed. Flowering trees lined the main yard and served as a transition between spaces.

Figure 6.11 Edging

Guiding Principles

Moore's guide for creating the outdoor play and learning environment at the Environmental Yard include seventeen types of settings (see figure 6.14). Within each of the settings, Moore draws on elements from his list of site design criteria (see figure 6.13). Entrances should be evident, and should mark arrival and departure. Moore suggest that visual, tactile, or acoustic cues such as flag poles, paving, or wind chimes are good indicators of arrival and departure from a play space. Entrances should also have plenty of space for socializing, as children often wait for their parents in this area. A table with seating is located close to the entrance of the Environmental Yard, where there is ample space for socializing (Moore, Natural 242).

CRITERIA FOR SITE DESIGN

- Accessibility • Safety • Graded challenge • Diversity and clarity • Flexibility • Change
- Permanence • Open-endedness • Multi-sensory stimulation • Year-round use • Shelter
- Social interaction • Design for all ages • Variety of social spaces • Landmarks • Edge effect
- Multi-sensory clues • Wildlife habitats • Domestic animals • People-plant interaction
- Mix of people-made and natural elements • Differentiated settings • Undefined places
- Indoor-outdoor relationships • Supervision • Manipulability • Variety of spatial experiences
- Refuges • Completion points • Play above ground • Ease and economy of construction

Figure 6.12

OUTDOOR PLAY AND LEARNING SETTINGS

1. Entrances
2. Pathways
3. Signage and Displays
4. Fences and Enclosures
5. Manufactured Equipment and Play Structures
6. Multipurpose Game Settings
7. Groundcovers and Safety Surfaces
8. Landforms and Topography
9. Trees and Vegetation
10. Garden Settings
11. Animal Habitats
12. Aquatic Settings
13. Sand and Dirt Settings
14. Play Props
15. Gathering, Meeting, and Working Setting
16. Performance Settings
17. Field Stations and Storage Settings

Figure 6.13 Moore's design guide

From the entrance, universally accessible primary pathways should lead visitors to centers of activity. Secondary pathways may serve as play elements providing the opportunity to explore. This may come in the form of nature trails or hard surfaced pathways for bikes or wheeled toys. Fences and enclosures are important elements throughout the site and along pathways. They offer protection to sensitive plants from heavy traffic, help to guide visitors through an established path, or differentiate one space from another. Flexibility in design empowers designers to think of various types of elements as enclosures— logs, rocks, shrubs, low walls, tall grasses, etc. Directional signs providing information of all entry points, facilities, and locations of play settings should be placed at entrances and at points of pathway changes. Regulatory signs, identification of facility signs, bulletin boards, and expressive signs contribute to a sense of involvement with, and responsibility to, the space. Washington Elementary children created their own expressive sign they named the Dream Wall (see figure 6.14), in response to their feelings about the Environmental Yard (Moore, Natural 10).

The Environmental Yard's manufactured equipment and built play structures give children the opportunity to test their boundaries and take risks. Moore incorporated multilevel play structures as well as overhead runways and climbers at the Environmental Yard. Groundcover is an essential aspect to areas where risk-taking is most likely to occur, and should be provided per safety standards. In addition to built play equipment, informal spaces for ball games allow for a variety of uses in the multipurpose area (Moore, Natural 244). Although the Environmental Yard retained a hard-surfaced cover in the multipurpose space, Moore also suggests grass as an alternative. The Environmental Yard used their multipurpose area for ball games, wheeled toys, festivals, dances, and plays (Moore, Natural 176).

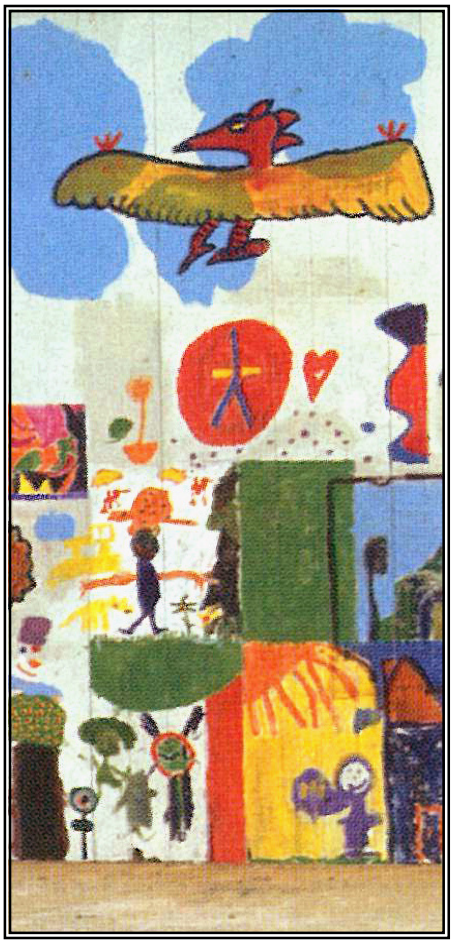


Figure 6.14 Dream Wall

Figure 6.15 Play structure area

Figure 6.16 Environmental Yard, entrance, swings, kickball, sand area, resting place, etc.

According to follow-up research at the Environmental Yard, the Natural Resource Area is the most used space. The vegetation screened some of the pollution and noise from the nearby road. Auto noises are replaced by sounds of moving water from the stream and waterfall, and the voices of children playing. The garden setting offered a work-play atmosphere. Children composted the waste from their own lunches, harvested the vegetables they grew, and cooked them. "Garden projects had the unique capacity to generate a collective sense of purpose through shared experience of getting one's hands in the soil" (Moore, Natural 34). All children of various levels participated in gardening. In addition to the garden, the trees, vegetation, and aquatic feature supported a wide range of play activities in the Natural Resource Area. Leaves, sticks, insects, sand, water, and mud are abundant play props that are utilized. Figure 6.19 demonstrates how a meeting space made of railroad ties becomes a place to jump, balance, hop, and walk (Moore, Natural 92).

Figure 6.17 Natural Resource Area

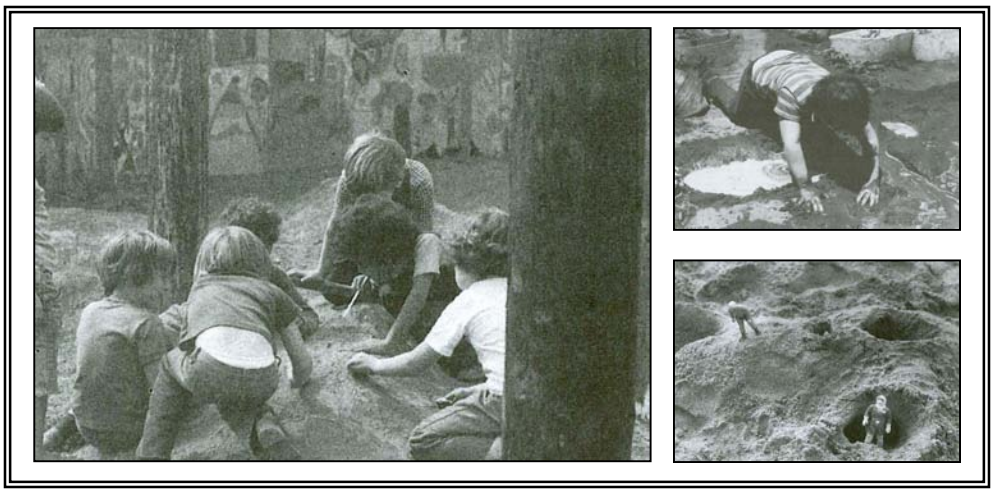


Figure 6.18 Hands-on involvement

Similar to the attitudes of Sorensen and Rudolph, Moore encourages the hands-on involvement of children in the development of their own spaces—from initial planning and design to construction and follow up evaluations. Just as adventure playgrounds/workyards continually evolve as children take ownership of the space, the Environmental Yard is transformed when a new group of children begin to interact with it. The children at Washington Elementary continue to be an influential factor in the evolution of the Environmental Yard. Change is inevitable as educators continuously introduce new projects to maintain the creative interest of the students (Moore, Natural 240). "There is no end result. Because the context is educational, it always offers new opportunities for discovery, for adventure, and for learning about oneself, the community, and the biosphere—and their interrelationships. The history of adventure, the place, and the people co-evolve as well, always open to new twists and turns" (Moore, Natural 241).

Funding

The Environmental Yard received much of its funding from federal, state, and local grants administered through the school system. The financial support provided for supplies and equipment (benches, hammers, trees, etc.), for people (student assistants, support staff, and consultants), and for site development (asphalt removal, fencing, play structures, etc.) (Moore, Natural 236). Local companies and city departments donated construction materials such as soil amendment, sewer pipe sections, and fencing material. One of the most treasured play structures was the large tunnel that so many children requested. Donated by the regional water utility district, the five-foot-long section of the five-foot-diameter Mokelumne Aqueduct was the first object to arrive at the Environmental Yard (Moore, Natural 66). Beyond financial support and donations of materials, the Environmental Yard called for its own staff of committed volunteers. Moore admits that the need for dedicated staff was never fully satisfied. Responsibilities for maintaining the site included having someone to plan and manage the site, conduct research, develop curricular activities, organize the community, raise funds, write grants, and handle insurance (Moore, Natural 236). Volunteers were largely made up of Washington Elementary School staff. They assisted in the daily maintenance of the site. University students also contributed to the Environmental Yard, often working with children. University professors and parents applied their own professional skills as well.

Applications for Eastwyck Village

By the 1990s schoolyards across the United States were transformed by naturalization efforts, habitats for wildlife, and gardens. As these school grounds became more ecologically diverse, the curriculum was no longer isolated to the indoor classroom. The outdoors became a learning

ground for art, music, drama, nature studies, science, and mathematics (Mason 48). Moore maintains that children that connect with nature through daily access to its basic elements (sun, soil, water, air, vegetation, and animals) will learn to protect the biosphere. Further, that "without continuous hands-on experience, it is impossible for children to acquire a deep intuitive understanding of the natural world that is the foundation of sustainable development" (Natural 194).

Despite the fact that Eastwyck Village is not a school ground, many of its residents share a common goal with the project at Washington Elementary—recreating child-friendly places. Similar to Washington Elementary, Eastwyck Village is located in a high-density urban area. Both sites manage issues of pollution and noise from an adjacent busy road. The Natural Resource Area was planted with trees and vegetation, and soon a buffer was created against noise and pollution from traffic. Unlike Eastwyck Village, Washington Elementary had to plant all of the vegetation on their site. Eastwyck Village residents, on the other hand, benefit from many of the mature wooded areas throughout the site. Unfortunately, invasive plant species and dense undergrowth have created inhospitable areas. For the children at Eastwyck, options to explore outside of their community are hindered by traffic, fenced-off neighbors, and an unapproachable creek. Outside of school, their neighborhood is, or could be their primary territory for learning and play. In chapter 7, using Moore's criteria for site design, I will propose settings similar to those found at Washington Elementary Environmental Yard. I will address ways in which the curricular aspects of the Environmental Yard can be applied to the residential neighborhood of Eastwyck Village.

CASE STUDY #2: RECONNECTING CHILDREN WITH NATURE

Oakhurst is a community in Decatur, Georgia, only four miles northwest of Eastwyck Village. Recently, the Oakhurst area has seen a revitalization. Laura Raines of the Atlanta Journal-Constitution attributes the positive change directly to the time and energy invested by community members (Raines, par. 3-4). In 1993 a woman named Sally Wylde moved to the Oakhurst area from a rural area in Massachusetts. When she arrived in Decatur to attend theology school she wondered what effects urbanization and the separation from nature had on local residents. Three years later, a group of local children vandalized her neighbor's yard. In response, Wylde and the neighbor, Louise Jackson, asked the children to become caretakers of the garden. The children restored Jackson's garden and were soon creating a garden in the median strip in front of Jackson's home. The children were extremely proud of their work, and so was the community. The mayor soon presented each of the children with a certificate of appreciation (Oakhurst, "About," par. 1).

In 1997, Wylde and a group of neighbors realized that a half-acre lot in their neighborhood was available and was a likely candidate for development. In response, they acquired the property in order to preserve it as green space. Wylde realized that most of the children in her community were not familiar with nature (Walter 52). After witnessing the children at Jackson's garden she recognized the benefit of establishing the property as Oakhurst Community Garden. Volunteers from the community began leading after-school and summer programs at the garden for elementary and middle school students. With Wylde as the program director, volunteers created programs that focused on nutrition, environmental education, community service, and gardening. The garden also rented out garden plots to families wanting to grow their own produce or flowers. A year after its inception, Oakhurst Community Garden

became Oakhurst Community Garden Project with non-profit 501(C)(3) status (Oakhurst, par. 1-7). By 2002, Oakhurst Community Garden Project had a board of directors, an executive director, and a program coordinator. The garden was three times larger than it had been five years earlier. Oakhurst Community Garden Project had purchased two adjacent lots which increased their property size to an acre and a half, and programming had expanded to reach toddlers and teens.

Figure 6.19 Entrance to the east side of the property

Design Elements

Oakhurst Community Garden Project occupies a corner lot, with Oakview Drive fronting the property to the south, and McDonough Drive bordering the east side of the property. The property to the west is currently being developed into a single family residence. The garden's northern border is lined by a small stream and dense woods. The garden is sunken below street level and is visible from both Oakview Drive and McDonough Drive. Once you step down into the garden the traffic is faintly noticeable. There are five entrances onto the property, giving the garden a welcoming feel. On the front west side of the property, off of Oakview Drive, an arbor entrance offers both ramp and step access down into the garden. East of that entrance, the garden office provides a handicap drop-off location from the driveway. Another arbor entrance and a gravel path, to the east of the garden office, grants access from Oakview Drive. The last, most subtle entrance is located on McDonough Drive, toward the rear of the garden. Most likely created from a desire line, this entrance seems more like a nature trail.

Figure 6.20 Oakhurst Garden entrances: corner of Oakview Drive and McDonough Drive, view from the west, off of Oakview Drive, and Oakhurst Community Garden Project office and handicap entrance

The garden appears to have at one time been created-piecemeal. As opportunities have arisen, the garden seems to have found ways to provide for the needs of the community. Examples of this include a fountain that was installed in memory of a community member (figure 6.43); ornamental bird feeders and art decorating the site; mosaics that can be found in seemingly random places; and fences and cages that have gone up and down to accommodate pygmy goats, rabbits, ducks, and chickens (Walter 53-56). In 2003, after acquiring additional land and building successful programs, Wylde and Oakhurst Community Garden Project's board of directors wanted to ensure they were using the site wisely. They sought the assistance of landscape architect Donald Hooten to develop a comprehensive master plan. The master plan is now on display for the community to see at Oakhurst Community Garden (see figures 6.28-6.29). The plan will be implemented, as funding permits, in three phases over five years. Phase I will result in the construction of a perimeter safety fence, a detention basin, and new paths. Phase II will involve the creation of an outdoor classroom, sensory garden, and a toddler play area. Phase III will provide Oakhurst garden with two gazebos, a meditation area, and a habitat and stream bank restoration (Oakhurst, "Fundraising," par. 1-5). In February of 2004 EcoWatch AmeriCorps volunteers, Outward Bound volunteers, and Oakhurst Community Garden board members, staff, and volunteers began Phase I as they installed erosion fencing in preparation for construction. To date, the garden has completed the construction of the perimeter safety fence and detention basin.

Figure 6.21 East view, from the top of the gravel path at the corner of Oakview and McDonough Drive

Figure 6.22 Inside the garden facing gravel path

Figure 6.23 Hooten's Plan easily seen by all

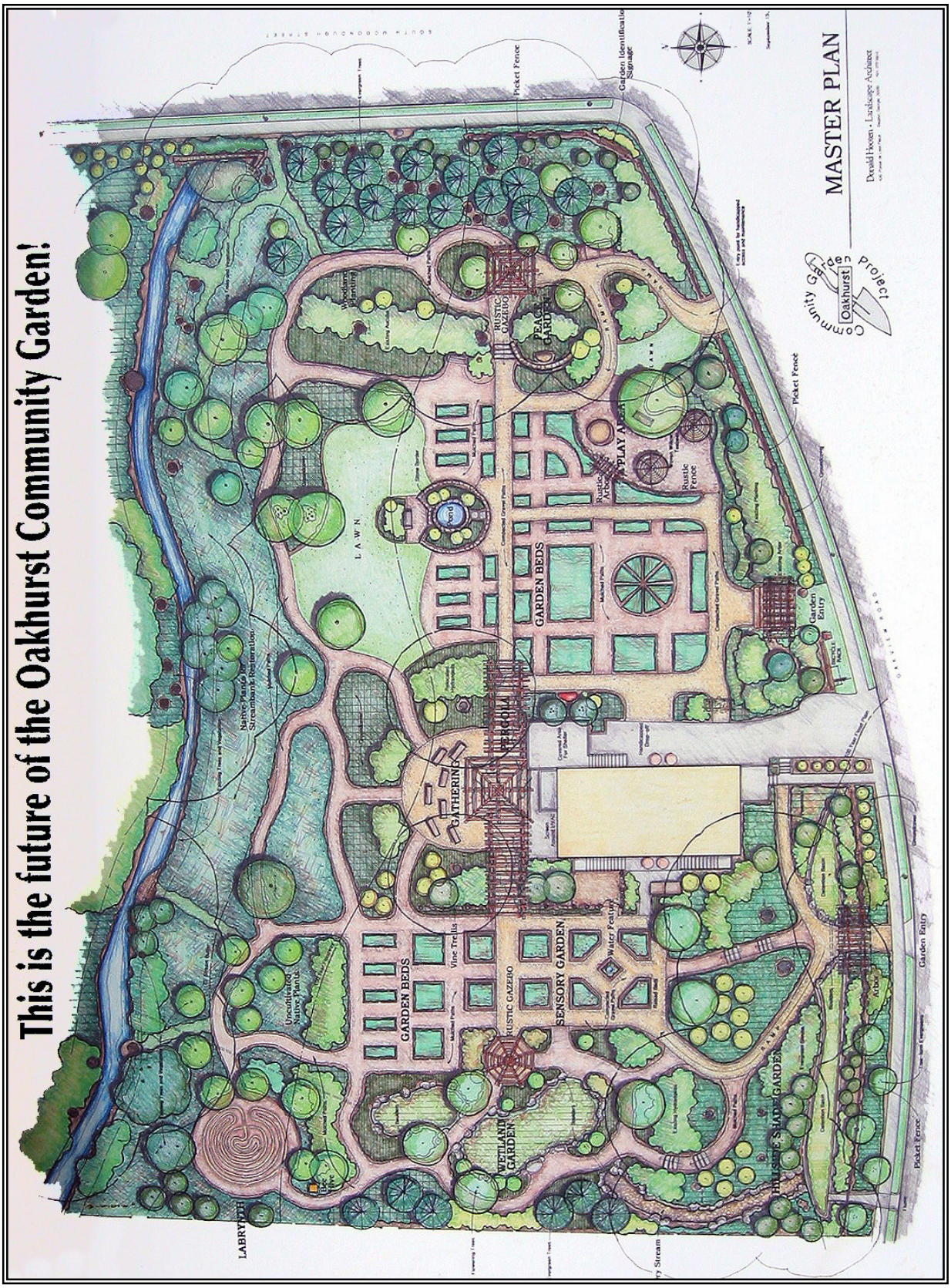


Figure 6. 24 Hooten's master plan

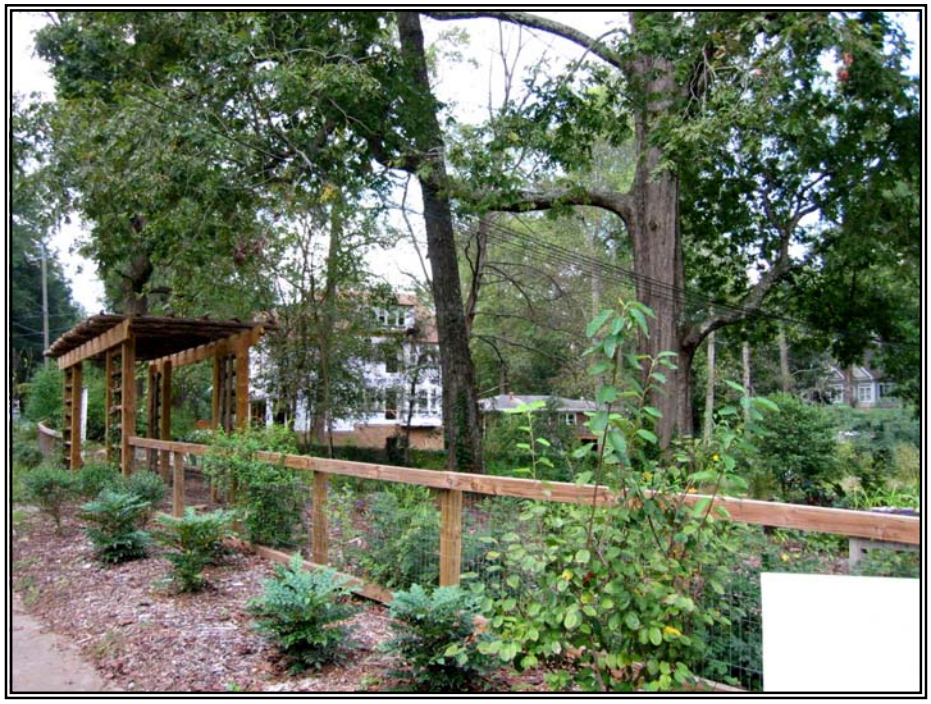


Figure 6.25 Arbor entrance into west side of property

The west side of the property currently accommodates the detention basin and newly built raised beds that are planned for the sensory garden. A water feature, that will sit in the center of the raised beds, will serve as sensory stimulation. Here, and throughout most of the property, walkways are made of compacted gravel. Just past the raised beds, toward the rear of the property, several community and demonstration planting beds of various sizes are in use. A hillside garden has been planted just north of the detention basin. As overflow water escapes the detention basin, it winds its way down past the hillside shade garden, to the wetland garden. Closer to the stream, uncultivated native plants and much of the existing plant material will remain and provide a suitable environment for the beehive that is located in this area. Tucked away in the northwest corner of the property, Hooten proposes a labyrinth. Currently, this area is edged in existing vegetation and covered in perennials.

Figure 6.26 Detention basin

Figure 6.27 Raised and on-ground planting beds, west side of property

Figure 6.28 Hillside garden and channel to wetland garden, west side of property

Figure 6.29 Beehive location with new construction on adjoining property, west side of property

Figure 6.30 Garden office

The original house, which now serves as the garden's office, is located somewhat central to the rest of the property. Tools and equipment are stored in the basement. Visitors can find information about the property on the front porch. Oakhurst Community Garden Project produces a newsletter which is also available. Signs decorate the front entry notifying the community about upcoming events. Behind the office, an open gathering space has been created from a semi-circular formation of chairs. This group gathering space divides the eastern and western sides of the property. A vine trellis on the west side, planted beds and a shade tree on either side of the space, a mulched floor, and the group of chairs differentiate this space as a social meeting area. From here, the view to the east is open to the rest of the property.


Figure 6.31 Garden gathering space


Figure 6.32 Vine trellis

Figure 6.33 View from gathering space, toward the rear east side of property

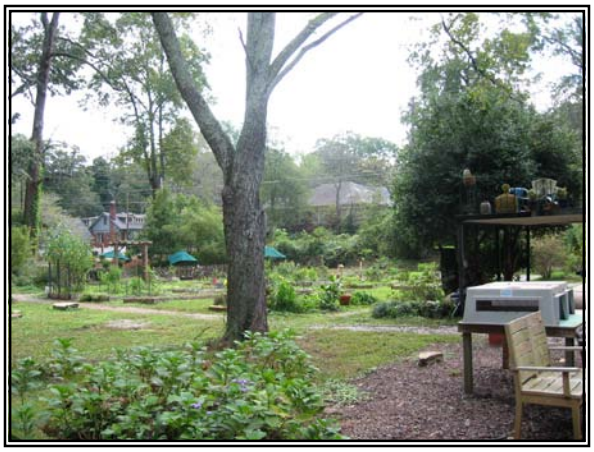


Figure 6.34 View from gathering space, toward the front east side of property

Unlike the west side of the property, which is more shady and enclosed, the eastside of the property is brighter and feels full of activity (see Figures 6.38- 6.43). Community garden plots varying in size from 4x8 feet to 10x12 feet are located to the east of the office. Each plot reflects the personality of the community gardener tending it. Some are free of weeds, tidy, and have seedlings planted in distinct rows. Other plots are more natural. Many are decorated with personal touches. Another gathering space, located just east of the community garden plots toward the front of the property, offers a small intimate waiting, resting, or meeting area. A rustic fence and benches enclose the space from the nearby pathway. A small sandbox and a child's activity chair sit under the shade of trees.

Figure 6.35 Eastside of property, personal touches in the garden

Toward the rear of the property, running water can be heard several feet away from the stream. Worn paths lead to the stream's edge. Nearby, bird feeders hang in the spot where Hootan suggests stream bank restoration and native plantings. Along the rear of the property, toward McDonough Drive, composting stations occupy the corner of the lot. Large trees and planted beds edge the east side of the property. Community additions give personality to the space.

Figure 6.36 Community accents

Figure 6.37 Features on the east side of the property

Guiding Principles

Oakhurst's mission is to "empower youth to become active members of the community by engaging them in projects that address real needs" (Oakhurst). Community members of all ages have become empowered by their participation in the garden. Oakhurst's mission guides them in the variety of programs they offer. Programs range from instruction in composting to raising chickens, making pavers, and creating holiday wreaths. By teaching wellness, teamwork, and conservation, Oakhurst hopes that youth will take charge of their own health, as well as the environment's (Oakhurst, "About," par. 4-7). The success of the Oakhurst Community Garden is due to the involvement of the community. OCGP successfully utilizes this resource by ensuring that the community is well aware of the activities and needs of the garden. OCGP maintains a website that provides general information about the garden and notifies the community about upcoming programs. They produce a newsletter that recognizes garden donors and reports any new activities with photos and articles. Throughout the site, gardeners find signs with helpful tips or encouraging words.

Figure 6.38

Figure 6.39 Garden signage

Funding

Through Oakhurst Community Garden Project's non-profit status, a board of directors made up of eight members, an executive director, and a program coordinator oversee and direct programs at Oakhurst Community Garden. The cost to maintain the garden and provide year-round educational programs is $120,000 per year. OCGP receives funding from donations, grants, and from the Decatur school system for their after-school and summer programs (Walter 58). Strong leadership and valuable programming can be attributed to the successful attainment of donations. Several other foundations, organizations, and businesses donate to Oakhurst Community Garden Project. BellSouth Corporation, the City of Decatur, Georgia Forestry Commission, and Georgia Pacific Corporation are just a few that support the work at Oakhurst Community Garden. More than half of the cost to implement the master plan was funded by a grant through the City of Decatur from the Arthur M. Blank Family Foundation.

Figure 6.40 Arthur M. Blank Family Foundation grant initiative

Applications for Eastwyck Village

Oakhurst Community Garden Project does not claim to have followed a set of design criteria when they began creating the Oakhurst Community Garden, nor have they maintained that specific settings had to be in place for the garden to be successful. The garden came

together gradually through volunteer work, funding, and new programming. Interestingly, years of work have resulted in a garden that possesses many of the design criteria and settings Moore established for Washington Elementary's Environmental Yard. In creating a design for Eastwyck Village, I will also use Oakhurst Community Garden Project as a model, as it contains many aspects of Moore's criteria for design and outdoor play and learning settings. Community support and involvement are paramount to the success of both Washington Environmental Yard and Oakhurst Community Garden Project. Oakhurst Community Garden Project demonstrates the power a community has when it works together to create healthy and constructive opportunities for children. Inviting the community to become members of the garden and allowing them to contribute aesthetically are ways in which Oakhurst Community Garden Project has fostered a relationship with the community and its volunteers. Keeping the community abreast of current programs and activities is also a way in which Oakhurst Community Garden Project has maintained active participation at the garden. These lessons will be transferred to a design and management proposal for Eastwyck Village.

CHAPTER 7

DESIGN PROPOSAL AND RECOMMENDATIONS

Thus far, Eastwyck Village residents have had moderate involvement in the renovation process of their community landscape. As mentioned in chapter 2, residents were interviewed and meetings took place in order to understand the vision of the community. This chapter seeks to address their concerns through a holistic approach. Realizing that there are many factors that contribute to the success or failure of playgrounds and other community spaces, inventory and analysis were utilized to determine the cause of issues such as muddy playgrounds. Unlike the Environmental Yard and Oakhurst Garden, which each occupy less than two acres of closely connected land, Eastwyck Village occupies forty-five acres, with homes, parking lots, and roads dividing open space and pedestrian circulation. Although this poses a challenge for the design at Eastwyck Village, design elements found at the Environmental Yard and Oakhurst Garden help to provide the foundation for guiding principles. The following pages present these guiding principles, as well as a concept diagram and a master plan. Previous chapters have provided a comprehensive review of children's play spaces and developmental stages, as well as examples of successful play and learning environments. This information is applied toward detailed drawings, explanations, and design recommendations.

The following guiding principles were first used to establish settings, circulation, and problem areas to be addressed at Eastwyck Village. The concept diagram on the next page represents this process, and shows proposed concepts over existing conditions. Following the concept diagram, the master plan represents a culmination of the overall design proposal for Eastwyck Village.

GUIDING PRINCIPLES

- Enhance the ecological character and play-use ability of the site through remediation of stormwater and creek-related problems.
- Provide welcoming, accessible pedestrian pathways throughout the community.
- Ensure clarity of community play spaces through use of entrances, fences or enclosures, signage, and landmarks.
- Increase the opportunity for social interaction in the community by providing a variety of social spaces.
- Establish spaces for play, exploring, and refuge.
- Encourage community stewardship and involvement.

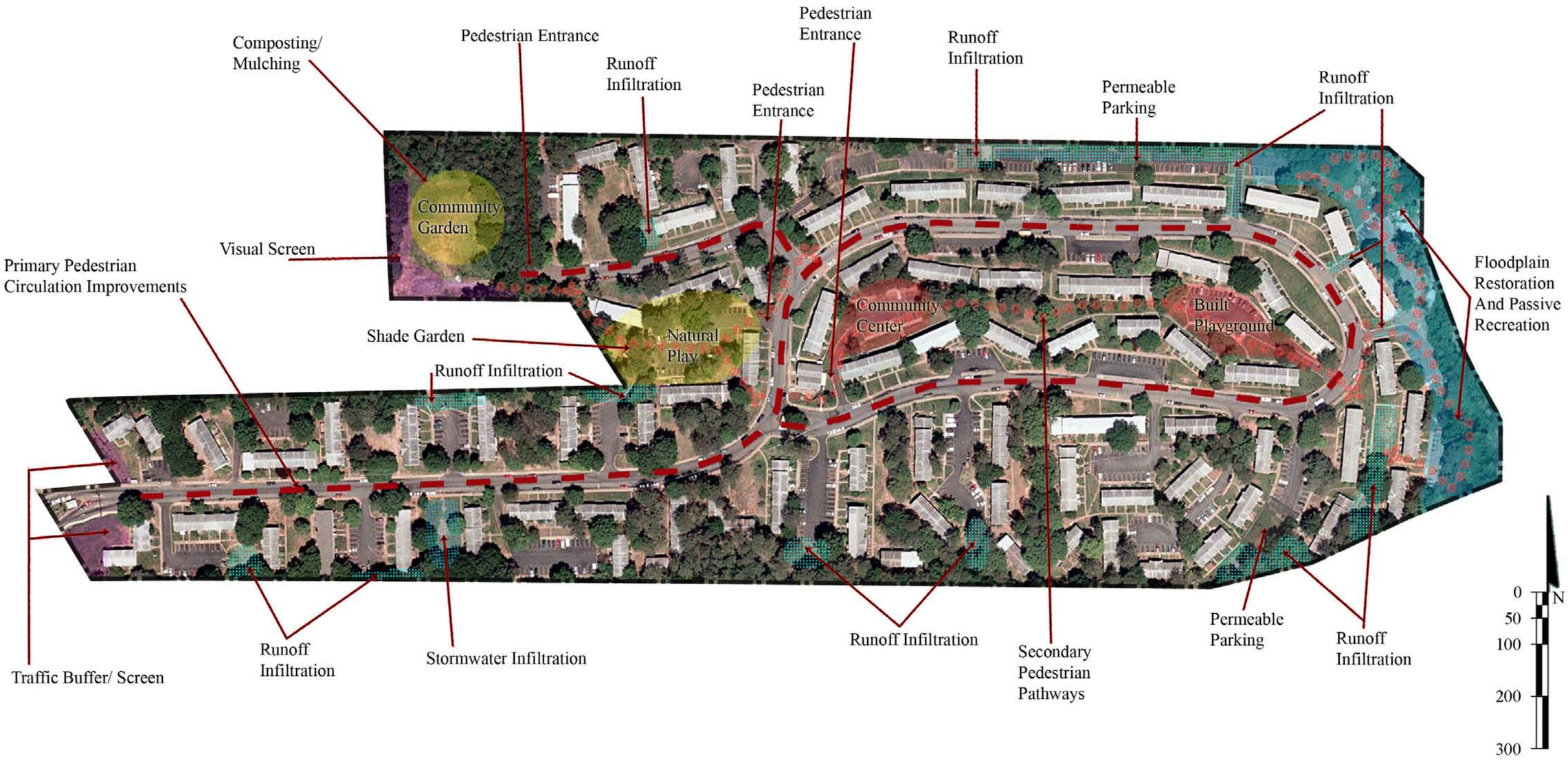

Composting/
Mulching
Pedestrian Entrance
Runoff
Infiltration
Pedestrian
Entrance
Pedestrian
Entrance
Runoff
Infiltration
Permeable
Parking
Runoff
Infiltration
Community
Garden
Visual Screen
Primary Pedestrian
Circulation Improvements
Shade Garden
Natural
Play
Runoff Infiltration
Community
Center
Built
Playground
Floodplain
Restoration
And Passive
Recreation
Traffic Buffer/ Screen
Runoff
Infiltration
Stormwater Infiltration
Runoff Infiltration
Secondary
Pedestrian
Pathways
Permeable
Parking
Runoff
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Figure 7.1

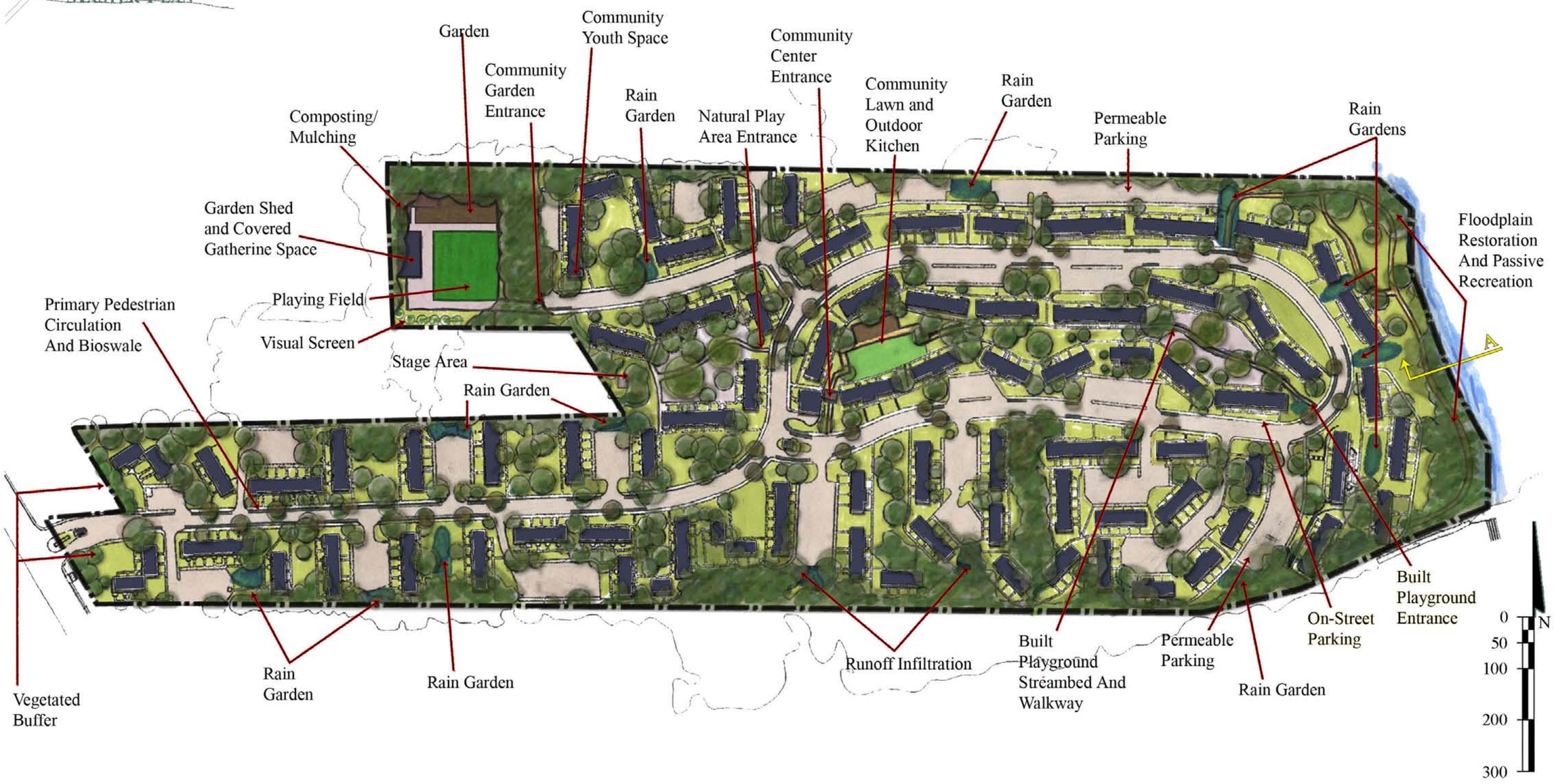
Garden
Community Youth Space
Community Center Entrance
Community Garden Entrance
Rain Garden
Natural Play Area Entrance
Community Lawn and Outdoor Kitchen
Rain Garden
Permeable Parking
Rain Gardens
Composting/ Mulching
Garden Shed and Covered Gatherine Space
Playing Field
Visual Screen
Stage Area
Rain Garden
Primary Pedestrian Circulation And Bioswale
Floodplain Restoration And Passive Recreation
A
A
Vegetated Buffer
Rain Garden
Rain Garden
Runoff Infiltration
Built Playground Streambed And Walkway
Permeable Parking
Rain Garden
On-Street Parking
Built Playground Entrance
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Figure 7.2

ECOLOGICAL ENHANCEMENT

Floodplain Restoration

As mentioned in chapter 3, the aquatic life of Shoal Creek is severely impaired as a result of pollution. Friends of Shoal Creek is a community organization in Decatur that works to repair and protect the creek. Volunteers organize and take part in litter removal events and educate the community about the importance of working toward keeping Shoal Creek clean from urban pollutants. Eastwyck Village should take part in this effort. The creek is designated for fishing. With the help of Friends of Shoal Creek and community efforts to manage stormwater in an ecologically sensitive way, fishing in the creek may be possible over time. Efforts at Eastwyck Village include an increase in the stream buffer, restoration of the floodplain, and modifications to the management of stormwater.

Existing parking at the rear of the property is located in the floodplain. As stormwater makes its way down Eastwyck Circle it collects in these parking areas and drains directly into Shoal Creek. On-street parking and the addition of pervious parking spaces in other parking lots would provide the opportunity to transform the two parking lots into a floodplain restoration area. The driveways leading into those parking areas now become vegetated buffers that will

Figure 7.3 Driveway from Eastwyck Circle converted to vegetated buffer

receive stormwater from Eastwyck Circle. Re-vegetation with plants of the mesic piedmont forest should follow the removal of both parking lots. From the vegetated buffers and throughout the restoration area, low impact trails would provide passive recreation for Eastwyck Village residents. Ideally, trail pathways would consist of a raised boardwalk made of wood planks. This would easily allow for drainage and would minimize the impact of foot traffic. Unfortunately, although a raised boardwalk would be aesthetically attractive and durable, it is also relatively expensive to construct. Given that this area will have relatively low foot traffic because it will only be utilized by residents of Eastwyck Village, a granular stone will be suitable for the trail surface. The soils in this area are prone to flooding, and therefore an unprepared trail surface would likely be muddy. Densely compacted granular stone would allow infiltration and would also be sturdy enough for wheelchairs.

Figure 7.4 Section A on Master Plan, elevation of floodplain restoration area

FLOODPLAIN RESOTRATION AREA DEVELOPMENTAL AND PLAY VALUE OPPORTUNITIES

2 years
At this age, children are mastering walking. The trails would allow for the practice of walking and the use of push or pull toys. 2-year-olds may enjoy observing details, listening to birds, water, and leaves in the wind. May use the environment as an element in fantasy play.

3-5 years
Running, jumping, and walking can be accommodated on the trails. Toddlers are beginning to classify objects and can begin to differentiate plant materials. They enjoy helping adults with projects—erecting birdhouses and similar activities in this space would provide the opportunity to use physical and intellectual skills. They are receptive to repetition and predictability—objects like windchimes, birdhouses, birdfeeders, etc. could be placed along the trail to satisfy this need.

6-8 years
At this age children are beginning to draw and write with more ease. They may respond well to chores and will want to feel as though they are a contributing member of the family or, in this case, community. They could be encouraged to help with the creation of informative and expressive signs throughout the trail.

9-13 years
The floodplain restoration area is well suited for children in middle childhood to early adolescence. Natural processes could stimulate intellectual development, and trails offer a place to move about and release their boundless energy. Programs organized through the community youth space could make use of the emotional, social, and intellectual development of youth at this age. Independent problem-solving and the ability to take on responsibility would be excellent qualities for stewards of the floodplain restoration area.

EASTWYCK VILLAGE RESIDENTS:
Although creek access and the addition of trees is not a priority for surveyed adults and children of Eastwyck Village, improvements in the floodplain restoration area could support many of the outdoor activities that the community has requested. In addition to walking, running, and picnicking, after-school and summer programs could use this area as the foundation of their programming, similar to Oakhurst Garden.

Figure 7.5

Previously, residents of Eastwyck Village often avoided the area near the creek. With clearly marked trails and proper maintenance, this area would be more appealing. The trails would be six feet wide. Maintenance would involve the clearing of vegetation to two feet on

either side of the trail. Selectively thinning vegetation to a width of seven feet on either side of the trail would also produce a more open and inviting trail. Figure 7.4 shows how a section of this floodplain area would look with a vegetated buffer and trail. Signs at trailheads should indicate a map of the pathway and information regarding the process of restoration. The more residents know about their community the more they will become invested in it. Updates on the process of restoration and how they might contribute to its success will encourage responsible environmental stewardship.

Stormwater

Runoff has had an extremely negative impact at Eastwyck Village, both ecologically and aesthetically. Existing methods of stormwater management have resulted in flooded areas, loss of topsoil, and the poor water quality of Shoal Creek. Gravel parking stalls, rain gardens, and bioswales are all suggested strategies for improvement. In order to make up for the parking spaces lost in the restoration process of the floodplain, additional parking would be provided in three lots. On-street parking would provide for the remaining parking spaces needed. Any added parking, or parking spaces replaced in the future, would be permeable surfaces. Parking areas would be a combination of crushed stone and asphalt, similar to the parking stalls in figure 7.5.

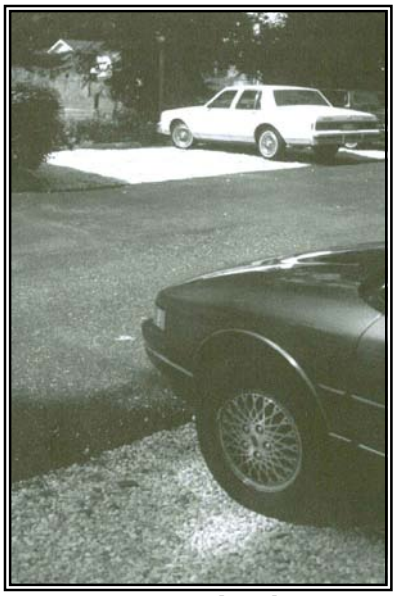

Figure 7.6 Gravel parking

Stone or gravel parking areas assist in the process of infiltration; however, with a rain garden nearby, infiltration and the removal of toxic chemicals is more likely to occur. Rain gardens have been found to have excellent pollution-

removing capabilities. They perform many of the same cleansing functions that forested riparian buffers perform. They are capable of removing 60%—80% of nutrients and up to 99% of heavy metals (Russ 233). Essential elements of rain gardens include a grass or gravel buffer strip that allows water to enter the rain garden. A shallow depression of approximately six inches collects storm water and either infiltrates into the soil or evaporates. An organic layer of shredded hardwood helps to remove chemicals, while resisting washout (Virginia, par.11). A mixture of leaf mulch, sandy soil, and topsoil provide the planting medium for the plant material. Riparian plant species are well suited for rain gardens. Many of the plantings would incorporate butterfly-attracting perennials. See figure 7.10 for a list of rain garden plantings.

Figure 7.7 Buffer strip

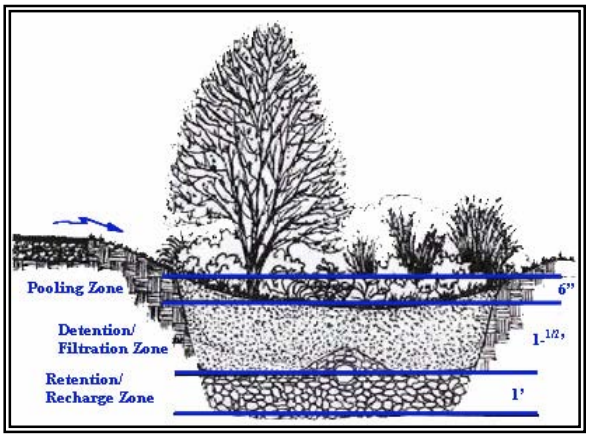

Figure 7.8 Rain garden diagram

Figure 7.9 Frequently washed-out area, just east of ball field area

RAIN GARDEN PLANTS

Wildflowers, Ferns, Grasses, and Sedges:

- *Eupatorium coelestinum*, Blue mist flower
- *Habranthus tubispathus*, Texas copper lily
- *Helianthus angustifolius*, Swamp sunflower
- *Iris fulva*, Red Louisiana iris
- *Lobelia cardinalis*, Cardinal flower
- *Penstemon tenuis*, Gulf coast penstemon
- *Physostegia virginiana*, Fall-blooming obedience plant
- *Rudbeckia maxima*, Giant coneflower
- *Stokesia laevis*, Stokes aster
- *Adiantum capillus-veneris*, Southern maidenhair fern
- *Onoclea sensibilis*, Sensitive fern
- *Chasmanthus latifolium*, Inland sea oats
- *Muhlenbergia capillaris*, Gulf muhly grass

Trees and Shrubs:

- *Acer rubrum* var. *drummondii*, Southern swamp maple
- *Betula nigra*, River birch
- *Cephalanthus occidentalis*, Buttonbush
- *Gelsimium sempervirens*, Carolina jessamine
- *Ilex cassine*, Dahoon holly
- *Ilex decidua*, Possumhaw
- *Ilex verticillata*, Winterberry holly
- *Magnolia virginiana*, Sweetbay Magnolia
- *Myrica cerifera*, Southern wax myrtle
- *Sabal minor*, Dwarf palmetto
- *Taxodium distichum*, Bald cypress

Figure 7.10

The master plan for Eastwyck Village designates several suitable locations for rain gardens. Where space and soils allow, parking lots and gutters at Eastwyck would drain into nearby rain gardens. One courtyard in particular at Eastwyck Village receives a significant amount of runoff from a neighboring commercial lot. Frequent flooding during storms is a common occurrence. This area is labeled “Stormwater Infiltration” on the concept diagram. Figure 7.8 takes a closer look at the effects of runoff in this area. The loss of topsoil from storm surges has left this area bare and compact. A large rain garden with densely rooted plants would slow the water down during a storm surge, stabilize soils, and aid in preventing sediment and pollution from reaching Shoal Creek.

Figure 7.11 Aerial of frequently flooded area

Figure 7.12 Frequently flooded from commercial parking lot runoff, before and after representation with rain garden installation

Management of stormwater is crucial to enhancing the ecological integrity of Eastwyck Village. In addition to the implementation of rain gardens as an instrument for cleansing runoff, bioswales are recommended along roadways throughout the community. Similar to rain gardens, bioswales make use of vegetation and soils to filter contaminants and assist with the infiltration of stormwater. Bioswales are vegetated drainways, linear in form, and are designed to move runoff slowly down an incline. The primary difference between rain gardens and bioswales is that rain gardens infiltrate runoff in a specific location while bioswales direct runoff to a vegetated area at a low elevation where a raised grate allows overflow to enter the storm sewer during heavy storms.

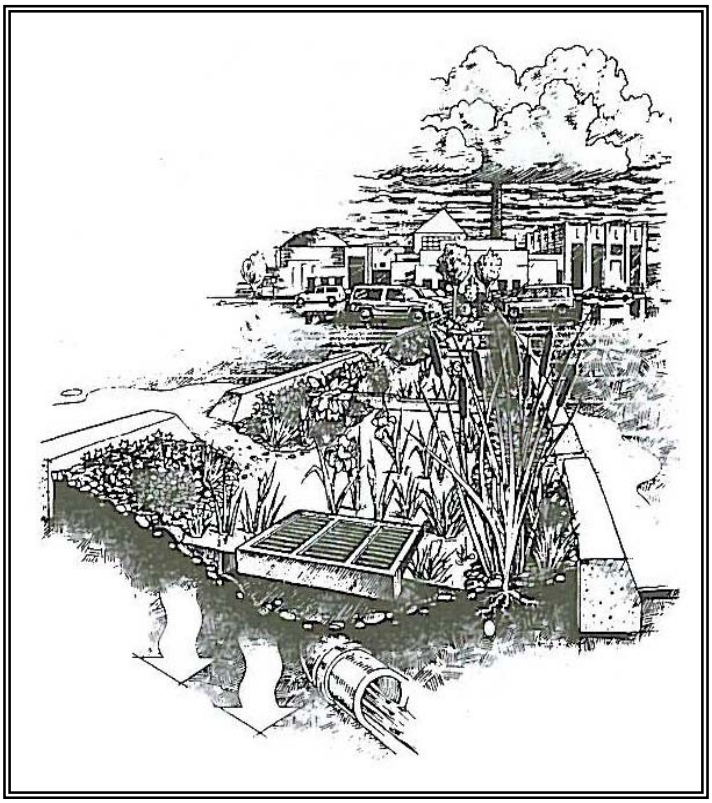

Figure 7.13 Bioswale

CIRCULATION

Currently, three-and-a-half-foot-wide sidewalks line the roads throughout Eastwyck Village. Many are in poor condition and in need of replacement. Narrower driving lanes and clearly marked crosswalks would encourage cautious traffic movement. Wider sidewalks would allow for social interaction as pedestrians could walk side-by-side, with bioswales providing a buffer between traffic and sidewalks. Landscaping along pedestrian routes is especially important when planning for children. Children's bodies are more compact than adults' and tend to overheat faster. Trees lower the air temperature and create shelter from direct sun and strong winds. Bordered by Interstate 20 and Candler Road, Eastwyck Village is exposed to a significant amount of pollution. Trees and shrubs work as sound barriers, reducing noise. Leaf surfaces capture dust, pollen, and smog. In addition to the many health benefits from having shrubs and trees planted at Eastwyck Village, plants can facilitate play and provide sensory stimulation and a sense of place.

The exposure of Eastwyck's entrance to the traffic of Candler Road necessitates a planted buffer, which can also serve as a landmark for children. Perhaps it would allow them to recognize their neighborhood not by its location in relation to the Wendy's fast-food restaurant, but by the seasonally changing trees that line the front of the property. Upon entering the property, the primary pedestrian circulation route that parallels Eastwyck Road would be replaced by five-and-a-half-foot-wide sidewalks. Circulation routes can become opportunities for children to interact with their environment. Walking along pathways rich in texture, smells, and colors stimulates a child's mind. By planting different types of trees on each street in the

community, the trees serve as landmarks. Secondary paths would extend beyond the roadway, linking various play and social spaces throughout the community. These pathways would be accompanied by small trees and shrubs with diverse play qualities and features ranging from fragrant flowers to capped nuts and velvety leaves.

LEISURE SPACES

Community Center

Much of the activity that occurs at Eastwyck Village takes place around the community mailboxes. School buses pick up and drop off children in this area. The Eastwyck Village Management Office is also within a few steps of the mailboxes. Residents have access to a room within that office that they use for social gatherings and community meetings. By converting the adjacent parking lot into a community and family picnic space, Eastwyck Village residents will be able to have gatherings where they make use of both indoor and outdoor facilities. A lawn area, several picnic tables, an outdoor kitchen with water, and grills would be found within this space.

The main entrance to this area would be off of the south side of Eastwyck Circle. A drop-off lane and ramped entrance would replace the existing driveway. A banner created by Eastwyck Village residents would mark the pedestrian entrance to the Community Center. Located at a high point on the property, the banner would be seen from a distance. Residents would come to the center for information regarding community

Figure 7.14 Example of covered entrance with display cabinet

activities and news. An archway extending out from the management office would shelter bulletin boards. Community programs, updates, and resident postings would be displayed here. Seating beneath the archway would provide a waiting area for visitors.

COMMUNITY CENTER AREA DEVELOPMENTAL AND PLAY VALUE OPPORTUNITIES

2 years
The lawn in this area provides the opportunity for caregivers to read stories outside on a soft surface. Walking, sitting, crawling, and running are all activities that could occur here. Play props such as building-blocks from home may also supplement play. As the social center of the community, the community center fosters language development through peer and adult interactions.

3-13 years
Social interactions are the dominate activities for children older than age 2. By age 3 children begin talking freely to others and act more cooperatively. Group activities are well suited in this area where the outdoor kitchen and tables support social gatherings. Children will enjoy using tables for games, drawing, painting, picnics, etc.

EASTWYCK VILLAGE RESIDENTS:
The community center area would facilitate many of the activities requested by adults at Eastwyck Village—bible class, community watch programs, quilt making, and book clubs. Children requested a place for babysitting, dance/step, tutoring, singing, and counseling. The community center area would be an ideal space for these activities.

Figure 7.15

Community Garden

Inventory and analysis reveal that the ball field area is a suitable location for a community garden. As Eastwyck Village does not currently own the property with the basketball court on it, it was not included in this area of the master plan, but Eastwyck should consider purchasing the property. This would allow for the opportunity to connect and extend the community garden area. Although soils here and throughout the site are low in fertility and organic matter, permeability and microclimate offer a good environment for the garden. Soil

amendments would be brought in and raised beds would be constructed. The garden space would begin at the north edge of the field area, and would not utilize the entire space. A portion of the playing field would remain for various field games.

Situated at the end of Kayebrook Road, the community garden entrance would be clearly marked with a sign designed and constructed by the residents. The close vicinity of the community youth space would allow Eastwyck's youth to easily access the garden. The youth space could provide the opportunity for indoor connections to garden activities. Books on gardening could be located here and young gardeners could use this space to create plans for their own garden.

Pathways would be accessible to all pedestrians. Along the western perimeter of the garden, bordering the property line, blackberry and blueberry bushes would be planted. These bushes would create an edible screen from the neighboring property. Presently, low visibility from the rest of the property is likely the cause of infrequent visits to the field by children. The field is approximately twenty-two feet higher than Kayebrook Road. Just as was suggested for trail ways in the floodplain restoration area, selective thinning of the wooded area bordering the garden area would improve visibility. Removal of dense underbrush and invasive plant species like kudzu and privet is essential to this effort.

Figure 7.16 Blackberry bush screen

Residents have used the wooded edge of the ball field to dump their yard waste. Wood mulching and composting would be a beneficial element of the garden. Rather than allowing

tree clippings to pile up in the woods, mulched wood could be used throughout the site, as well as in the garden. The wood mulcher would be accessible only to the maintenance staff of Eastwyck Village Townhouses. Residents would have the opportunity to manage their own garden plots. A short fence painted by the children of Eastwyck Village would enclose separate children's plots. Some garden plots would be at ground level, while others would be raised eighteen inches above ground for wheelchair accessibility. A small tool and potting shed would allow for the storage of community-shared garden tools. Planting books for both adults and children would be housed here. Covered and uncovered gathering areas would provide a place for social interaction and rest. Rain barrels would capture rain from the shed and the covered gathering space. A centrally located water spigot connected to drip irrigation would be accessible during dry spells.

Figure 7.17 Examples of rain barrels to be used in the garden

COMMUNITY GARDEN AREA DEVELOPMENTAL AND PLAY VALUE OPPORTUNITIES

2 years
Similar to the community center, the lawn and garden area provide the opportunity for the practice of gross motor skills—walking, sitting, crawling, running, digging, etc. Opportunities abound for sensory play with flowers, fruits, and/or vegetables planted in the garden. Social and language development occur through verbal interactions with peers and older children. Covered tables provide a protected area for painting and drawing.

3-5 years
Children between the ages of 3 and 5 enjoy crafts, coloring, and painting—all activities that can occur in this area. They are learning to count and would benefit from helping in the garden where they can count rows, create garden markers, etc. Pathways and lawn area would be used for kicking balls, running, jumping, and riding bikes or tricycles. Children will copy actions, moods, and attitudes of adults, therefore the garden is a beneficial place for adults to model activities that can help children understand the environment.

6-8 years
As children in this age group begin to work cooperatively with peer groups, the lawn area may again be used for team sports. Practicing specialized skills, like using a bat to hit a ball, are suitable here. Intellectually, children ages 6 to 8 will begin seeking out challenges and will enjoy experimenting and manipulating materials. The community youth garden is an excellent medium for this development. Problem-solving, creativity, and peer relationships may be strengthened here as they take responsibility of their own garden space.

9-13 years
The community garden space offers children ages 9 to 13 a place to express their independence. The community youth garden may be managed by children in this age category. The youth space (in close vicinity) may be used to lead and organize peer group meetings in which cognitive, language, and social skills would be practiced. Planning garden activities through mapping and planting would use both fine and gross motor skills.

EASTWYCK VILLAGE RESIDENTS:
"Health First: Eastwyck Village—A Landscape Management Plan to Heal and Beautify Eastwyck Village" reveals that maintaining a community garden is a low priority for a number of surveyed adults. Others list gardening as a favorite activity. Children are the least interested in having a community garden at Eastwyck. Case studies and child development theories reveal that a community garden would benefit the children at Eastwyck. Surveyed children request "anything for teens" and "summer and after-school camps." The lawn could continue to be used for baseball, football, and soccer, and the garden space could provide an area for Eastwyck youth to maintain.

Figure 7.18

Figure 7.19
Work inspires play

Planted Playscape

Although play can be found when children are gardening or wandering through the trails of the restoration area, two areas on the master plan are designated play spaces. These spaces are specifically intended for the use of children. The first play space is only a short distance from the community garden. Currently a parking lot, this proposed play space would be more visible than the existing playground, which is raised slightly higher than the parking lot, tucked away toward the edge of the property. Making use of the existing topography, a small stage is proposed. Raised up like an undersized boardwalk, the stage could be used for performances, dances, or as the top of a fort.

Figure 7.20 Examples of a play space created from plant material

This proposed space is designed as an alternative to the built structure playground. Children should be encouraged to explore and create in this space. Play props provided by plant material would facilitate fantasy play. The stage, pathways, sandbox area, and perimeter seating wall are the only built elements in this play area. This area is meant to be flexible to change. Children and adults could add to the area as they see fit. Supplemented play elements may range

from a toy brought from home to a tree house built by the community. Adults should find ways to incorporate elements that are important to the children that will be using it.

PLANTED PLAYSCAPE AREA DEVELOPMENTAL AND PLAY VALUE OPPORTUNITIES

2 years
Sand play, as well as walking, sitting, crawling, and running are activities that the youngest children would benefit from in this area. Plant material in this loaction would inspire make-believe and sensory stimulation.

3-13 years
Swinging, climbing, balancing, running, building and constructing, collecting, manipulating, digging, exploring, and handling are all activities that promote physical growth, and can occur in this area. Homemaking, solitary play, risk-taking, singing, role-playing, fantasy play, and experimenting are activities that promote emotional growth and are also supported in this area. The stage area and open-ended nature of this play area lends itself to a place of social (listening, group exploring, sharing, copying, cooperative projects, explaining, and questioning) and cognitive (problem-solving, observing, using tools, identifying, exploring, imagining, solitary play, and mimicking) development. Although children under the age of 2 will take part in some of these activities, they typically do not begin to interact with other children until the age of 3, and most of their efforts are put toward mastery of physical movements like walking and balancing. Children in middle childhood to early adolescence are likely to make the most of this area, as they have most likely mastered the challenges of the built play area, and are ready to take risks and experiment in a safe space where they can create their own challenges.

EASTWYCK VILLAGE RESIDENTS:
Playground improvement is cited as a high priority for surveyed children and adults.
The relocation of playgrounds would respond to the complaint of poorly sited existing playgrounds. Child development theories recommend diversity for healthy child development.
The planted playscape area would be part of a collection of diverse spaces at Eastwyck Village.

Figure 7.21

It is especially important that the pathways and seating wall be maintained in this area. Because the use of the space will be somewhat undefined, children would need to know the extent of the play boundary. The existing driveway off of Eastwyck Circle would be replaced by a fenced entrance and plantings with sensory qualities (see figure 7.18). Primary pathway surfaces would be crushed granular stone that would frame the perimeter of the space and act as direct routes through the area. They would occasionally be accompanied by a low wall for

sitting. The entire surface area of the play space is intended to be a sand surface, with secondary pathways winding their way through the space. Secondary pathway surfaces would be made of pea gravel, adding another textural element and differentiating this path from primary pathways.

A Japanese Zelkova tree and Willow Oak are the main attraction in this play area. Zelkova trees are excellent trees for climbing and are visually and texturally interesting. Their flaking bark reveals a variety of colors and textures, and their leaves are heavily toothed with fine hairs on one side. The green foliage of the Zelkova turns gold and auburn in the fall. A Willow Oak would provide the opportunity to swing. Unlike the bark of the Zelkova, the Willow Oak's bark is smooth and gray, becoming fissured with age. Its glossy leaves offer yellow and orange tones in the fall. Both trees are resistant to soil compaction, which make them well suited for children's play spaces. Fringe Tree, Japanese Maple, Fraser Photinia, Japanese Pittosporum, Smoke Tree, and Double-file Viburnum would also be incorporated as places to hide.

Figure 7.22 Japanese Zelkovas make excellent climbing trees

Figure 7.23 Japanese maples create great hiding places for children

Figure 7.24 Community additions encourage use of space

NON-TOXIC SENSORY PLANTS

Fragrance

Ground Covers and Perennials:
- *Allium giganteum*, Giant allium
- *Chamaemelum nobile*, Chamomile
- *Dianthus plumarius*, Cottage pink
- *Gaultheria procumbens*, Wintergreen
- *Geranium macroorrhizum*, Bigroot geranium
- *Hosta plantaginea*, Fragrant plantain lily
- *Monarda didyma*, Bee balm
- *Thymus x citriodorus*, Lemon thyme

Shrubs and Trees:
- *Buddleia davdii*, Butterfly bush
- *Chionanthus virginicus*, Fringe tree
- *Comptonia peregrina*, Sweet Fern
- *Juniperous virginiana*, Eastern red cedar
- *Lindera benzoin*, Spice bush
- *Myrica pensylvanica*, Bayberry
- *Raphiolepis umbellata*, Yeddo Hawthorn
- *Vitex agnus-castus*, Chaste tree

Play Props

Ground Covers, Perennials, and Vines:
- *Akebia quinata*, Akebia (pod)
- *Calamagrostis acutiflora 'Stricta'*, Feather reed grass (leaf, plume)
- *Lunaria annua*, Money plant (seed case)
- *Lunaria annua 'Variegated'*, Variegated money plant (seed case)
- *Sedum spp*., Stonecrop (dried flower stalks)
- *Stachys byzantina*, Lambs ear (leaf)

Shrubs and Trees:
- *Callicarpa dichotoma*, Beautyberry (berry)
- *Cercis canadensis*, Eastern redbud (pod)
- *Magnolia stellata*, Star magnolia (flower)
- *Myrica cerifera*, Wax myrtle (waxy berry)
- *Pinus strobus*, Eastern white pine (cones/needles)
- *Quercus rubra*, Red oak (paired, capped nut)
- *Rhus aromatica*, Fragrant sumac (catkin)

Seasonal Colors

Trees-Fall Leaves:
- *Acer ginnala*, Amur maple (red,yellow)
- *Acer palmatum*, Japanese maple (yellow, bronze, purple, red)
- *Cornus florida*, Flowering dogwood (red)
- *Cotinus obovatus*, Smoke tree (red-purple, red, orange, yellow)
- F*othergilla major*, Large fothergilla (yellow orange)
- *Viburnum plicatum tomentosum*, Double-file viburnum (red-purple)

Trees and Shrubs-Winter Fruit/Evergreens:
- *Aronia virginiana*, Red chokeberry (red)
- *Aucuba joponica*, Japaneses aucuba (red)
- *Cornus florida*, Flowering dogwood (red)
- *Juniperous virginiana*, Eastern red cedar (bluish gray)
- *Myrica pensylvania*, Myrica bayberry (gray, waxy)
- *Raphiolepis umbellata*, Yeddo Hawthorn (bluish-black)
- *Tsuga caroliniana*, Carolina hemlock (brown)

Perennials, Shrubs and Trees-Spring Leaves:
- *Cercis canadensis*, Eastern redbud (magenta, pink)
- *Chaenomeles japonica*, Japanese quince (red, orange-red)
- *Forsythia x intermedia*, golden-bells (yellow)
- *Fothergilla gardenii*, Dwarf fothergilla (whte)
- *Hamamelis mollis*, Chinese with hazel (red-brown)
- *Muscari armeniacum*, Grape hyacinth (blue)

Figure 7.25

Built Playscape

The second designated play space would replace the parking lot on the east side of the Community Center outdoor space. Built playground structures would dominate this site, providing various types of motor challenges. Swings, a slide, and a multi-level structure would lie within the boundaries of the space. Surface cover in this area would be sand with a crushed granular stone pathway through the center. An infant play area would be located in the western corner of the site with a low seating wall separating it from the rest of the playground. Several red maples and a Thornless Honey Locust would be planted nearby for shade. Red maples become orange-red in the fall. They attract song and water birds, and can be used for climbing. The Thornless Honey Locust turns yellow in the fall. Its bark is gray-brown and scaly. Located northwest of the play area, the Thornless Honey Locust would block harsh winter winds.

Figure 7.26 Illustrative examples of the built playground area

Figure 7.27 Vegetated courtyard, before and after—example of streambed installation

Currently, a flume captures runoff in the wooded courtyard and releases it on the Westside of the parking lot. This flume would be removed and replaced by a dry streambed. The streambed would run through the play area and along the pathway, flowing under a bridge and beneath the path. The dry streambed would terminate at a rain garden located at the east entrance to the play area. This entrance would replace the existing driveway off of Eastwyck Circle. Water collected from surrounding rooftops would be connected to a spout at the start of the streambed, allowing children to recreate the active stream. A fence would enclose the entire play area and would mark the entrance off of Eastwyck Circle.

BUILT PLAYSCAPE AREA DEVELOPMENTAL AND PLAY VALUE OPPORTUNITIES

2 years
This area has a space specifically designed for toddlers. Swings with secured seating, a small slide, and low bars to hang on allow for simple challenges. Sand play, as well as walking, sitting, crawling, and running are activities fostered here. With water nearby, manipulation and forming of sand promotes physical, and cognitive development. Rythmic movement, such as swinging, promotes cognitvie and physical growth.

3-8 years
A range of play activities, such as water play, sand play, sliding, swinging, climbing, and balancing encourage play by children of various abilities. A wide range of gross motor activities can occur in this area, and linked play structures allow children to constantly be on the move. Positive emotional growth occurs when children master the challenges of these structures.

9-13 years
Just like younger children, 9- to 13-year-olds benefit from the many gross motor activities that can occur on built playground structures. These include pushing, pulling, jumping, climbing, and sliding, among others. Emotional, social, and cognitive growth occur through group participation, risk-taking, and spatial orientation. As children in this group master the challenges of the built playscape, they may move to a less structured area, like the garden or planted playscape, to discover new challenges.

EASTWYCK VILLAGE RESIDENTS:
Over 50 percent of surveyed residents have children under the age of eighteen living in their household. The average age is eleven. These numbers explain why so many residents desire playground improvements. The built playscape area would offer separate play spaces for toddlers and older children—a request made by surveyed residents.

Figure 7.28

SUMMARY

Chapters 4 and 5 reveal that play includes the physical activity of running, swinging, jumping, balancing, and crawling. However, equally important elements of play involve the development of intellectual, social, emotional, and language skills. Children move throughout their communities finding opportunities to play wherever the go. Creating a design for children's play spaces at Eastwyck Village necessitated evaluating the entire community and

finding ways to provide diverse possibilities for play. In the process of assessing the site, it became obvious that the problem with stormwater management would have to be confronted. This management issue became an opportunity to provide areas with functional, aesthetic, and learning potential.

Because Eastwyck Village is much more spread out than the case studies in chapter 6, elements from Moore's Outdoor Play and Learning Settings were distributed over the entire site and connected through primary and secondary circulation. Oakhurst Community Garden and Washington Elementary Environmental Yard reveal that visibility of a play space is essential to the success of the space. Although Moore suggests places of refuge within the play space, the entire space should be accessible and visible to the community. The location of play settings was based on this factor— sited in close vicinity to the center of community activity. Previous playground spaces at Eastwyck Village were isolated and in disrepair. Within a short distance from the planted play area and the built playground area, Eastwyck Village Management Office will also easily be able to assess for damage and facilitate repairs. Locating the primary play spaces in highly visible areas will encourage a watchful eye. Many of the proposed community spaces are located in existing parking lots. With their removal, community spaces will link together and provide protected pedestrian spaces and circulation. Parking would be accommodated by on-street parking.

Community Involvement

The next step for the residents of Eastwyck Village is to become involved in the design and implementation of their community spaces. They have responded to questionnaires and attended meetings, but now is the time for leaders in the community to organize and work with

other residents and children to do the work that building community spaces entails. Eastwyck Village is cooperatively owned by all the residents—their participation in its design and management is vital to the success of social spaces. All residents, including children, should become involved in the initial design and planning stages, as well as the building and management of the spaces they propose.

Initial design and planning could entail community meetings in which children and adults discuss the needs and desires of the community. Mapping of valued community features would assist in the identification of features they would like to enhance, and features they would like to alter. Children are capable of creating spatial maps—their input should also be considered in the creation of final design criteria. Models could be made of clay or another similar workable material. Models would give the community a visual idea of what the community might eventually look like and may lead to additional design ideas. Once the community identifies their needs, design professionals may be called on to assist in creating a technical design that the community could use as they begin the application of their ideas.

Figure 7.29 Community involvement includes participation by children

Oakhurst Garden demonstrates this process. After determining their needs, a landscape architect created a design which the community has implemented in stages as funds afford. Funds are obtained through grants and donations by local organizations. Eastwyck Village could seek similar funding through its board of directors, which would include a representative from

the community. Funding at Oakhurst is used for the cost of materials and construction tools, but volunteers provide the majority of the manual labor. Eastwyck residents would benefit from implementing the design they proposed, by feeling a sense of accomplishment and ensuring that their ideas come to fruition. As evidenced by both Oakhurst Community Garden and Washington Environmental Yard, open communication with the community is an essential ingredient to a successful community space. The more informed the community is, the more involved they seem to be. In addition to community meetings, Eastwyck could expand means of communication through signage, community board postings, and newsletters.

Figure 7.30 Signage for community events and a newsletter at Eastwyck Village would encourage community involvement, demonstrated above at Washington Environmental Yard

This thesis is intended to provide an example of the possibilities for Eastwyck Village. Specific play settings and details are based upon preliminary surveys of Eastwyck residents as well as research on child development and children's play spaces. Fueled with this information, perhaps Eastwyck Village residents will feel more confident offering design suggestions and making decisions regarding the spaces they provide the children in their community.

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TABLE CREDITS

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FIGURE CREDITS

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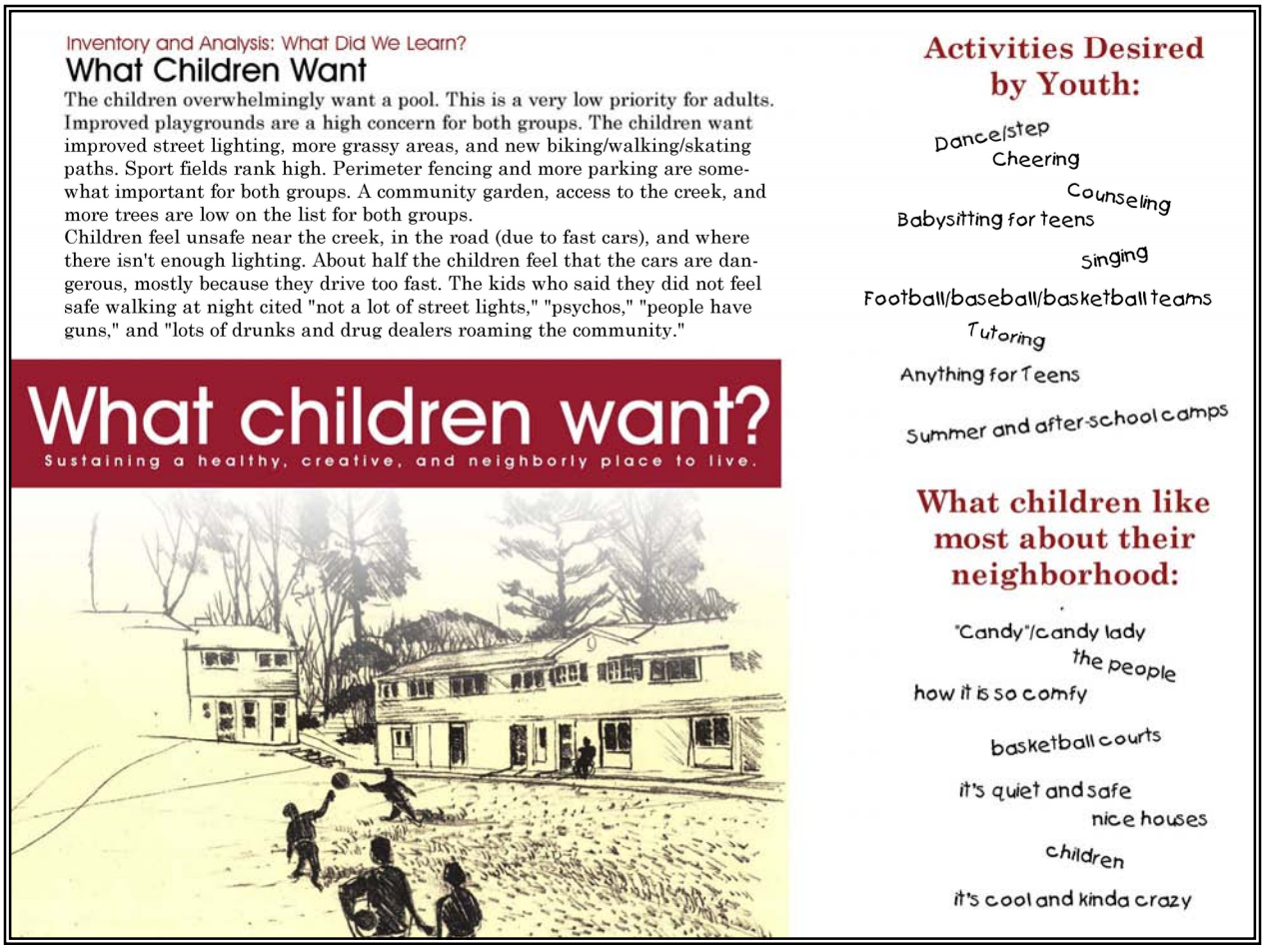
APPENDIX

EASTWYCK VILLAGE SURVEY AND RESULTS

Source: "Health First: Eastwyck Village—A Landscape Management Plan to Heal and Beautify Eastwyck Village."



Inventory and Analysis: What Did We Learn?

What Children Want

The children overwhelmingly want a pool. This is a very low priority for adults. Improved playgrounds are a high concern for both groups. The children want improved street lighting, more grassy areas, and new biking/walking/skating paths. Sport fields rank high. Perimeter fencing and more parking are somewhat important for both groups. A community garden, access to the creek, and more trees are low on the list for both groups.

Children feel unsafe near the creek, in the road (due to fast cars), and where there isn't enough lighting. About half the children feel that the cars are dangerous, mostly because they drive too fast. The kids who said they did not feel safe walking at night cited "not a lot of street lights," "psychos," "people have guns," and "lots of drunks and drug dealers roaming the community."

What children want?

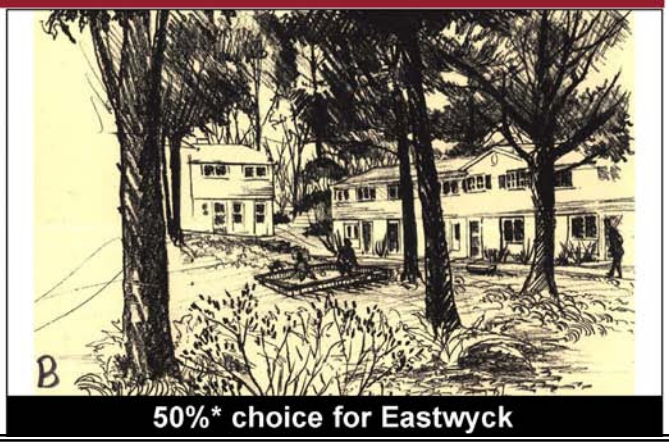
Sustaining a healthy, creative, and neighborly place to live.

Inventory and Analysis: What Did We Learn?

The Door-to-Door Resident Survey: What did we learn?

In response to 5 sketches that depicted different landscape types in front of a typical town house unit:

Door-to-Door Survey



- Over **70%** of the residents surveyed chose either the woodsy landscape or the woodsy landscape with sandbox/play area as their top choice for Eastwyck. It is interesting to note that the wooded landscape is an existing landscape many residents view outside their town houses. The difference is the bare and eroded ground. Most existing woodsy areas in Eastwyck are bare and eroded. The drawing shows ferns, low shrubs, and other shade-loving plants on the ground.

- When asked what type of landscape they preferred in front of their own town house approximately 60% preferred an open landscape with turf. The percentage was split almost evenly between those who preferred the lawns open to activity and those who did not.

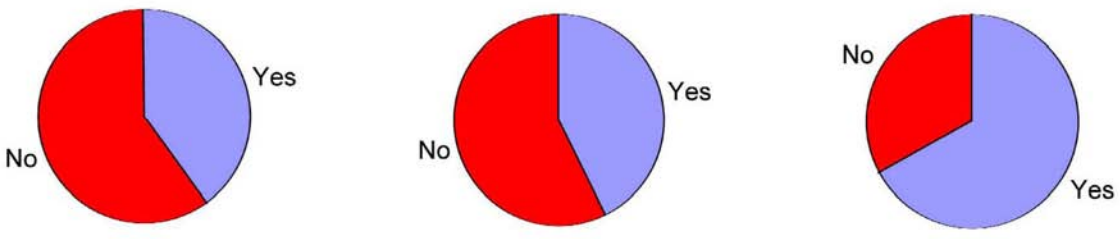
- From the sketches, those surveyed felt safest in the open landscapes whether or not they included people using the landscape.

- When choosing the landscape they felt their children would enjoy the most, there was another fairly even split between the open landscape showing play (53.1%) and the woodsy landscape showing the sandbox (43.8%).

*Note: % add up to more than 100% since respondents were allowed to choose more than one sketch as their favorite.

Inventory and Analysis: What Did We Learn?

Focus Group Meeting



Eastwyck Survey Results

Q1. How long have you lived in Eastwyck Village?

	Frequency	Valid Percent	Cumulative Percent
Less than one year	5	15.6	15.6
1-2 yrs	7	21.9	37.5
3-5 yrs	5	15.6	53.1
6-10 yrs.	7	21.9	75.0
11-25 yrs.	4	12.5	87.5
Over 25 yrs	4	12.5	100.0
Total	32	100.0	

Average number of years lived in Eastwyck: between 3-5 years

Q2. What influenced your decision to move here?

Factors	Frequency	Valid Percentage
Low payments	19	59.4
Friends of relatives	6	18.8
Close to work	1	3.1
Like the neighborhood	3	9.4
Better than public housing	0	0.0
Beautiful place	1	3.1
Because it was a co-op	1	3.1
Other	7	21.9

Q3. Do you like to spend time out-of-doors…….?

	Frequency	Valid Percent
No	11	35.5
Yes	13	41.9
Sometimes	7	22.6
Total	31	100.0
Missing	1	

Q4. How many people do you know by face …..?

Number of people	Frequency	Valid Percent
2	2	6.3
5	4	12.5
6	1	3.1
7	1	3.1
10	4	12.5
12	1	3.1

20	5	15.6
25	3	9.4
30	4	12.5
35	1	3.1
50	2	6.3
70	1	3.1
100	2	6.3
200	1	3.1
Total	32	100.0

Average number of people they know by face: 31 people

Q5. On a scale of 1 to 5, how important is the appearance of the grounds …..?

	Frequency	Valid Percent
Unimportant	1	3.1
Not very important	0	0.0
Somewhat important	0	0.0
Fairly important	6	18.8
Very important	25	78.1
Total	32	100.0

Q6. Could you tell us all the things you do outside…?

Activities	Frequency	Valid Percentage
Walk the dog	0	0.0
Walk with children	3	9.4
Play with children	6	18.8
Stroll alone	9	28.1
Stroll with family	2	6.3
Stroll with friends	3	9.4
Playground play	4	12.5
Exercise	2	6.3
Run/jog	1	3.1
Football	3	9.4
Soccer	0	0.0
Basketball	2	6.3
Community gardening	0	0.0
Personal gardening	0	0.0
Get mail	7	21.9
Pay rent	1	3.1
Talk to friends	3	9.4
Hang out with friends	1	3.1
Patio barbecue/picnic	2	6.3
Sunday market	0	0.0
Other	10	31.3
Other	2	6.3

Frequency of activities

Activities	2-dy	1-dy	2-3wk	1-wk	2-3 mth	1-mth	1-2yr
Walk the dog							
Walk with children						1 (3.1)	
Play with children				1(3.1)	1(3.1)	2(6.3)	
Stroll alone					4(12.5)	4(12.5)	1(3.1)
Stroll with family				1(3.1)		1(3.1)	
Stroll with friends				1(3.1)	1(3.1)	1(3.1)	
Playground play				1(3.1)		1(3.1)	
Exercise				1(3.1)	1(3.1)	1(3.1)	
Run/jog							1(3.1)
Football				1(3.1)	1(3.1)	1(3.1)	
Soccer							
Basketball					1(3.1)		
Community gardening							
Personal gardening							
Get mail					1(3.1)	6(15.6)	
Pay rent							
Talk to friends					1(3.1)		
Hang out with friends		1(3.1)					
Patio barbecue/picnic		2(6.3)	3(9.4)	4(12.5)	3(9.4)		
Sunday market							
Other	1(3.1)		2(6.3)	3(9.4)	1(3.1)	2(6.3)	1(3.1)
Other	2(6.3)						

Q13. Which of these landscapes would you like to see in Eastwyck?

	Frequency	Valid percentage
A	7	21.9
B	16	50
C	11	34.4
D	5	15.6
E	7	21.9

Q.14 Which of these landscapes would you like to see in front of your town house?

	Frequency	Valid percentage
A	7	21.9
B	6	18.8
C	11	34.4

D	1	3.1
E	9	28.1

Q15. In which of these landscapes would you feel safest?

	Frequency	Valid percentage
A	6	18.8
B	9	28.1
C	13	40.6
D	4	12.5
E	12	37.5

Q16. Which landscape would your kids spend the most time in (or enjoy the most?)

	Frequency	Valid percentage
A	4	12.5
B	14	43.8
C	17	53.1
D	2	6.3
E	3	9.4

Q17. Is Eastwyck a good place for children to grow up?

	Frequency	Valid Percent
No	4	12.5
Yes	24	75.0
In some ways	4	12.5
Total	32	100.0

Q18. Is there anyone in your household that is under the age of 18?

	Frequency	Valid Percent
No	14	43.8
Yes	18	56.3
Total	32	100.0

Q19. For each child, could you tell us their gender and age and what they do outdoors?

Average age (child 1)	7 (n=18)
Average age (child 2)	11 (n=13)
Average age (child 3)	11 (n=8)
Average age (child 4)	11.5 (n=4)
Average age (child 5)	6 (n=1)

	Frequency	Valid Percentage
Male	23	48.9
Female	24	51.1

Q22. Do you feel safer, less safe, or about the same, now than before the Village was gated?

	Frequency	Valid Percent
Less safe	1	4.3
Safer	15	65.2
About the same	5	21.7
Don't know/no response	2	8.7
Total	23	100.0
Came after gate was put in	9	

Q23. How safe do you feel outdoors around your house during the day?

	Frequency	Valid Percent
Very unsafe	0	0.0
Fairly unsafe	0	0.0
Don't think about it	0	0.0
Fairly safe	4	12.9
Very safe	27	87.1
Total	31	100.0

Q24. How safe for your children?

	Frequency	Valid Percent
Very unsafe	1	4.5
Fairly unsafe	0	0.0
Don't think about it	1	3.1
Fairly safe	7	31.8
Very safe	13	59.1
Total	22	100

Q25 How safe do you feel outdoors around your home after dark?

	Frequency	Valid Percent
Very unsafe	1	3.2
Fairly unsafe	5	16.1
Don't think about it	9	29.0
Fairly safe	7	22.6
Very safe	9	29.0
Total	31	100.0

Q.26. How safe for your children?

	Frequency	Valid Percent
Very unsafe	4	19.0
Fairly unsafe	4	19.0
Don't think about it	6	28.6
Fairly safe	3	14.3
Very safe	4	19.0
Total	21	100.0

Q27. How safe do you feel outdoors anywhere in Eastwyck during the day?

	Frequency	Valid Percent
Very unsafe	0	0.0
Fairly unsafe	0	0.0
Don't think about it	0	0.0
Fairly safe	9	30.0
Very safe	21	70.0
Total	30	100.0

Q28. How safe for you children?

	Frequency	Valid Percent
Very unsafe	3	14.3
Fairly unsafe	7	33.3
Don't think about it	5	23.8
Fairly safe	3	14.3
Very safe	3	14.3
Total	21	14.3

Q29. How safe do you feel outdoors anywhere in Eastwyck after dark?

	Frequency	Valid Percent
Very unsafe	1	3.2
Fairly unsafe	5	16.1
Don't think about it	9	29.0
Fairly safe	7	22.6
Very safe	9	29.0
Total	31	100.0

How safe for your children?

	Frequency	Valid Percent
Very unsafe	4	19.0
Fairly unsafe	4	19.0
Don't think about it	6	28.6
Fairly safe	3	14.3
Very safe	4	19.0
Total	21	100.0

Q30. How safe do you feel walking from the parking lot to your door during the day?

	Frequency	Valid Percent
Very unsafe	0	0.0
Fairly unsafe	0	0.0
Don't think about it	1	3.1
Fairly safe	2	6.3
Very safe	29	90.6
Total	32	100.0

Q31. How safe do you feel walking from the parking lot to your door after dark?

	Frequency	Valid Percent
Very unsafe	1	3.1
Fairly unsafe	3	9.4
Don't think about it	3	9.4
Fairly safe	8	25.0
Very safe	17	53.1
Total	1	3.1

Q33. Are you satisfied with grounds maintenance?

	Frequency	Valid Percent
No	15	46.9
Yes	17	53.1
Total	32	100.0

Q34. Would you be willing to volunteer to help make the grounds in the area around your townhouse more beautiful?

	Frequency	Valid Percent
No	7	21.9
Yes	25	78.1
Total	32	100.0

If yes, how many hours a month would you be willing to volunteer?

No. of hours	Frequency	Valid Percent
1	7	21.9
2	9	28.1
3	6	18.8
4	5	15.6
5	5	15.6
Total	32	100.0

Average number of hours willing to volunteer: 3 hours

Q35. On average, how much leisure time do you have each week?

16 hours

Q36-41. Would you be interested in participating in any of the following activities?

	No	Yes	Maybe	Already doing it
Community garden	16	12	4	
Neighborhood exercise	9	20	3	
Pot luck suppers	10	14	5	3
Recycling center	5	25	2	
Work groups	5	21	4	
Composting	9	18	2	1

Q42. Birthdate

	Frequency	Valid Percent
Before 1940	2	6.7
40's	5	16.7
50's	5	16.7
60's	8	26.7
70's	7	23.3
80's	3	10.0

Q43. Ethnicity

	Frequency	Valid Percent
African American	31	96.9
European/White	1	3.1

Gender

	Frequency	Valid Percent
Male	6	18.8
Female	26	81.3
Total	32	100.0