

CONNECTING SITE SAFETY, DESIGN, AND MANAGEMENT:
EXPLORING AND APPLYING CPTED PRINCIPLES IN PLANNING POLICIES
AND PRACTICES FOR GREEN TOWNSHIP, OHIO

By

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To Mom and Dad – I did my best

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TABLE OF CONTENTS

	<u>page</u>
ACKNOWLEDGMENTS.....	4
LIST OF TABLES.....	8
LIST OF FIGURES.....	9
LIST OF ABBREVIATIONS.....	11
ABSTRACT.....	13
CHAPTER	
1 INTRODUCTION.....	15
Research Question.....	15
Brief Site Description.....	15
Rationale.....	16
2 LITERATURE REVIEW.....	19
A Brief Overview of Crime Prevention through Environmental Design (CPTED)....	19
Practical Applications of CPTED Principles.....	26
CPTED Applications by Local Governments.....	26
Connections between Design and Management.....	31
Safer Places: the Planning System and Crime Prevention.....	31
Case Studies.....	36
Clarence Mews – Hackney, London, England.....	36
Gravesend Town Centre – Kent, England.....	38
Stroud Town Centre – Gloucestershire, England.....	40
Summary.....	43
3 METHODOLOGY.....	44
Practical Applications of CPTED Theory.....	44
Case Studies.....	45
Data Collection and Analysis.....	45
Demographic and Economic Data.....	46
Crime Data.....	46
Site Analysis.....	47
4 FINDINGS.....	49
Built Environment.....	49
Site Description.....	50

Site Analysis – SWOT Model	51
Strengths.....	52
Weaknesses	52
Opportunities.....	55
Threats.....	57
Green Township.....	60
Urban Design Analysis of Green Township.....	60
Social Environment.....	62
Demographic and Economic Analysis	63
Crime Analysis	65
5 RECOMMENDATIONS.....	94
Recommendations for Site Redevelopment.....	94
Full-Scale Redevelopment	95
Alternate Recommendation – Retrofitting of Existing Site	98
Design Guidelines.....	100
Surveillance.....	100
Boundary Definition	101
Access Control	101
Suggested CPTED Features for Redevelopment Design Plan	102
Entrances, Exits, and Pathways	103
Building Facades, Windows, and Doors.....	104
Public Spaces and Parking Areas	105
Lighting.....	106
Landscaping and Fencing	107
Signage	108
Miscellaneous Elements.....	108
Management Guidelines	109
Maintenance.....	110
Activity Support	110
Use Mix	111
Policy Recommendations, Program Support and Implementation.....	113
Proposed Policy Recommendations.....	114
Economic Development Strategies	116
Program Support and Implementation.....	117
Summary of Recommendations.....	121
6 DISCUSSION OF RESULTS	139
Connections and Interactions of Built and Social Environments.....	140
How Can CPTED Principles and Policies be Implemented to Enhance the Design and Management of a Site?	141
How are the Design and Management of a Site Connected?	143
7 CONCLUSION.....	145

Limitations to Knowledge and Complications.....	145
Recommendations for Future Study	146
Closing Remarks	147
APPENDIX	
A NOTES	149
“West Side” Defined	149
Cincinnati’s History – Race Relations.....	150
B PROPERTY REPORTS.....	152
C CPTED CHECKLISTS	160
D ECONOMIC DEVELOPMENT POLICIES.....	177
LIST OF REFERENCES	182
BIOGRAPHICAL SKETCH.....	186

LIST OF TABLES

<u>Table</u>		<u>page</u>
4-1	Demographic Data for Green Township and Hamilton County, from 2000 and 2010 U.S. Censuses.....	88
4-2	Crime Reports for Site from January 1, 2010 – June 24, 2012.....	90

LIST OF FIGURES

<u>Figure</u>	<u>page</u>
4-1 Map of Hamilton County, Green Township	74
4-2 Google Earth Snapshot of Site	75
4-3 Site Land Use Map with Tenant List and Location.....	76
4-4 Diagram of site entrances and exits	77
4-5 Map of On-Site Crime Reports – Crimes by Location and Type	78
4-6 Map of On-Site Crime Reports – Crimes by Location and Date	79
4-7 View of Werk Road Entrance and Site Signage	80
4-8 View of Toys R Us and Glenway Storage Superstructure	81
4-9 Partial View of Main Shopping Plaza Superstructure	82
4-10 Partial View of Main Shopping Plaza Superstructure	83
4-11 Partial View of Main Shopping Plaza Superstructure	84
4-12 Partial View of Main Shopping Plaza Superstructure	85
4-13 View of Main Parking Lot from Northwest Corner of Site.....	86
4-14 View of Site from Toys R Us Parking Lot.....	87
5-1 Example of a well-lit pathway	122
5-2 Example of Mixed-use Development in Philadelphia, PA	123
5-3 Example of First- and Second-story awnings in York, PA	124
5-4 Example of properly landscaped building façade in Virginia Beach, VA.....	125
5-5 Rendering of a mixed-use development and public space	126
5-6 Example of Playground designed with CPTED principles in Camden Park, UK.	127
5-7 Example of a well-lit parking lot	128
5-8 Example of CPTED-compliant lighting for pathways and parking areas.....	129

5-9	Diagram of proper parking lot design techniques by Rockbridge County, VA ..	130
5-10	Example of proper landscaping in a parking lot in Rockbridge County, VA	131
5-11	Example of perimeter fencing in Bishop’s Mead, Chelmsford	132
5-12	Diagram of CPTED-compliant building façade and sidewalk by Metrolinx, Toronto, Ontario	133
5-13	Example of CPTED-compliant ATM	134
5-14	Example of properly enclosed dumpster	135
5-15	Example of CCTV camera structure for outdoor spaces located in Stroud, UK	136
5-16	Example of Art Deco architecture and signage located in Albuquerque, NM ...	137
5-17	Example of Italianate architecture located in Over-the-Rhine, a downtown Cincinnati neighborhood	138

LIST OF ABBREVIATIONS

ACPO	ASSOCIATION OF CHIEF POLICE OFFICERS
ALO	ARCHITECTURAL LIAISON OFFICERS
ADT	AVERAGE DAILY TRIPS
BLS	BUREAU OF LABOR STATISTICS
CAT	COMMERCIAL ACTIVITIES TAX
CCTV	CLOSED-CIRCUIT TELEVISION
CIP	CAPITAL IMPROVEMENT PROGRAM (OR PLAN)
CPD	CINCINNATI POLICE DEPARTMENT
CPTED	CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN
DAAP	(COLLEGE OF) DESIGN, ARCHITECTURE, ART AND PLANNING
FAR	FLOOR AREA RATIO
FBC	FORM-BASED CODES
FLUM	FUTURE LAND USE MAP
GIS	GEOGRAPHIC INFORMATION SYSTEMS
GTPD	GREEN TOWNSHIP POLICE DEPARTMENT
HCRPC	HAMILTON COUNTY REGIONAL PLANNING COMMISSION
HCSO	HAMILTON COUNTY SHERIFF'S OFFICE
LOS	LEVEL OF SERVICE
LU	LAND USE
LUI	LAND USE INTENSITY
LULU	LOCALLY UNWANTED LAND USE
MSA	METROPOLITAN STATISTICAL AREA
NIJ	NATIONAL INSTITUTE OF JUSTICE
NIMBY	NOT IN MY BACKYARD

PDR	PURCHASE OF DEVELOPMENT RIGHTS
PIR	PROPERTY INVESTMENT REIMBURSEMENT AGREEMENT
POP	PROBLEM-ORIENTED POLICING
PUD	PLANNED UNIT DEVELOPMENT
RAC	REGIONAL ACTIVITY CENTER
SARA	SCANNING, ANALYSIS, RESPONSE, ASSESSMENT (SARA MODEL)
SBD	SECURED BY DESIGN
SWOT	STRENGTHS, WEAKNESSES, OPPORTUNITIES, THREATS (SWOT MODEL)
SUP	SPECIAL USE PERMIT
TDR	TRANSFER OF DEVELOPMENT RIGHTS
TIF	TAX INCREMENT FINANCING
TND	TRADITIONAL NEIGHBORHOOD DEVELOPMENT
TOD	TRANSIT ORIENTED DEVELOPMENT

Abstract of Thesis Presented to the Graduate School
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A planner has two primary responsibilities: to serve the public interest, and to find the highest and best use of land. When these responsibilities are neglected, communities are likely to experience negative consequences in their built and social environments. Such is the case in Green Township, Ohio, a small, residential suburb located in Hamilton County, just west of the city of Cincinnati.

This study set out to examine the connections and interactions between the built and social environments, the connections between the design and management of a site, and how Crime Prevention through Environmental Design (CPTED) principles can be implemented to enhance these connections and interactions. These questions were presented in regards to planning and development policies and practices in Green Township and Hamilton County. In particular, this study focused on a conceptual redevelopment plan for a big-box neighborhood shopping center, located in Green Township. This 29.4 acre site was selected for study due to long-standing and increasingly serious issues, including criminal activity and poor design and

management; these issues are reflections of issues found throughout the surrounding community.

The redevelopment plan for the neighborhood shopping center site incorporates CPTED principles with mixed-use and traditional neighborhood style development, focusing on connecting the design and management strategies for the site. The redevelopment plan is supported by proposed policy and program changes for current planning and development regulations in Green Township and Hamilton County. The redevelopment plan is intended to serve as a catalyst for future development practices and projects in the area, acting as a conceptual case study for CPTED-based developments.

CHAPTER 1 INTRODUCTION

Research Question

The purpose of this thesis is to explore various planning and design strategies and theories in regards to a conceptual redevelopment plan for a neighborhood shopping center, located in Green Township, Ohio. Green Township is a suburban community located in Hamilton County, just west of the city of Cincinnati. This thesis is also an exercise in examining the possible connections and interactions between the built and social environments, and how each influences the other. Specifically, we are interested in whether Crime Prevention through Environmental Design (CPTED) principles and policies, as well as other crime reduction and prevention theories and principles, can be incorporated into designs and implemented to enhance the design and management, or form and function, of a mixed-use development. We are also interested in exploring the connections between the design and management of a development. It is important for the reader to understand that the proposed plan and recommendations are speculative, as the development has not been designed or built in reality. All recommendations are based on research, including case studies and existing “best practice” literature. It is our hope that this development could potentially serve as a catalyst for real development in the area, as well as changes in local government policies and planning strategies

Brief Site Description

The site in question is located in Green Township, adjacent to the City of Cincinnati. The 29.439 acre site is currently zoned G (Green Township) PUD (planned unit development), which allows for flexibility in development. Currently, there are 6

superstructures (large structures containing multiple tenants and storefronts) built on the site, with a total finished area of 418,938 square feet. Complementing the buildings is a massive 240,000 square foot sea of asphalt parking. The site is bordered by Glenway Avenue to the north, Werk Road to the south, and residential development on the east and west. The main issues we have selected to address within the site as they pertain to the form and function include high tenant turnover and vacancies, poor site design with nondescript buildings and signage, a surplus of parking, poor site navigability, disconnection from the surrounding community, and criminal activity in and around the site. The site will be further analyzed in detail in Chapters 4 and 5.

Rationale

This topic was chosen to address the needs and concerns of the community where the author was born and raised. Green Township is a mostly residential community, with a few pockets of commercial activity scattered haphazardly throughout. Glenway Avenue, a large commercial corridor on the northern boundary of Green Township, is the primary location for most of the community's retail uses. The current commercial stock largely consists of generic discount and big box retailers and chain restaurants. Locally-owned businesses are few and far between. There is also a shortage of "specialty" retailers, which offers many opportunities for niche retailers to locate in the area. This need for specialty retail is based on personal observations, a survey of the nearby commercial stock, and informal discussions with community members. To address this need, we are proposing a mixed-use development on the site of a current big-box shopping center. This development will provide opportunities for specialty retailers, as well as set a new precedent for urban design standards and development practices in Green Township and Hamilton County.

In addition to addressing the need for specialty retail development, there is a growing concern for safety in Green Township. According to data provided by the Green Township Police Department (GTPD) and the Hamilton County Sheriff's Office (HCSO), the rate of reported crimes is increasing in the area. Green Township's reported crime rate has risen by 10.51% from 2005 to 2011 (Green Township Police Department, 2012). The most commonly reported crime in Green Township is theft, followed by assault and burglary. In a 2005 report produced by the Hamilton County Sheriff's Office, Green Township had a reported crime rate of 42.4 per 10,000, lower than the Hamilton County rate of 57.5 per 10,000, but Green Township's reported crime rate was raising faster than the average for all communities in Hamilton County. (Hamilton County Regional Planning Commission, 2005) The rising rate of criminal activity is the basis for using CPTED principles in our recommendations. The issue of "perceived" crime is also part of our recommendations for CPTED, as the "fear" or "feeling " of crime and disorder can affect a community as much as "real" crime (Murrey, 2008).

Development in the area has occurred sporadically and inconsistently for the past several decades, and most of this growth has been in the form of national chain retailers inhabiting existing shells of other big box stores that have moved from the area. There is no concern for sustainable development, and the area lacks a sense of place due to lax design regulations. Based on informal discussions with a number of community members, there is a desire for change. The community is in dire need of planning intervention, largely a result of the "laissez-faire" attitude from local governments in regards to Green Township. The community lacks direction in terms of planning and development, which is evidenced by the lack of comprehensive planning

strategies for the community. This project is speculative in nature, which makes evaluating the possible results difficult. By basing our recommendations on existing research and case studies, we hope to show a possible scenario of successful implementation of CPTED principles and design practices which could be used in the future by developers and local governments in their planning processes and policies.

CHAPTER 2 LITERATURE REVIEW

This chapter provides a review of the literature pertaining to CPTED and practical applications of the theory. The focus of research is related to implementation of CPTED principles into the design and management of a development, specifically mixed-use development. This chapter begins with a brief overview of CPTED theory, including its origins and development over time. This is followed by closer, in-depth review of CPTED principles and practical applications of these principles as they relate to the scope of this project. This chapter also reviews literature on the connections between design and management of a site, which includes a review of several case studies and programs implemented by government agencies in the United States and in the United Kingdom.

A Brief Overview of Crime Prevention through Environmental Design (CPTED)

The relationship between the conditions of the physical environment and criminal activity was brought to the forefront of discussion when the late Jane Jacobs, an American-Canadian writer and community activist living in New York City, published her 1961 book, "The Death and Life of Great American Cities." Her work roused widespread interest in the study of how environmental conditions influenced human behavior, specifically how the environment influenced criminal activity. Jacobs presented her idea that "cities were custom-made for crime" (Jacobs, 1961, p. 31): the way they were designed and built meant that citizens would not be able to build or maintain informal social control networks necessary for effective self-policing (Robinson, 1996). Jacobs also discussed that "crime flourished when people did not know and meaningfully interact with their neighbors, for they would thus be less likely to notice an outsider who

may be a criminal surveying the environment for potential targets or victims” (Jacobs, 1961, p. 31) (Robinson, 1996). Jacobs’ theory of “eyes on the street” outlined the importance of natural surveillance and territoriality by neighborhood residents in the sense that criminal activity is less likely to occur in communities where the neighbors know and watch out for each other, and in turn contact police to intervene when deemed necessary. Jacobs’ discussion of the connections between the physical environment and criminal activity is one of the founding theories for place-based crime prevention, and in turn, CPTED theory.

Social scientists James Q. Wilson and George L. Kelling also contributed to the early discussion of the relationship between the physical environment and criminal activity. Their 1982 article “Broken Windows” presented the theory that establishing a high-quality physical environment, as well as maintaining and monitoring said environment, can prevent anti-social behaviors, and in turn, more serious criminal activity (Wilson & Kelling, 1982). The “broken windows” title comes from the following excerpt:

Consider a building with a few broken windows. If the windows are not repaired, the tendency is for vandals to break a few more windows. Eventually, they may even break into the building, and if it’s unoccupied, perhaps become squatters or light fires inside. Or consider a sidewalk. Some litter accumulates. Soon, more litter accumulates. Eventually, people even start leaving bags of trash from take-out restaurants there or breaking into cars. (Wilson & Kelling, 1982, p. 3)

Wilson and Kelling argued that the physical environment plays a major role in the instances of criminal activity and the fear of crime; the appearance of ownership and well-kept properties would be more likely to deter criminal activity or anti-social behavior due to the established territoriality and presumed natural surveillance. The broken windows theory also discusses the impact of police foot patrols, which is the essence of

the theory of community-oriented policing, on crime rates and the fear of crime.

Community-oriented policing focuses on increasing police presence via foot patrols in order to create relationships between police and residents, as well as to increase trust in the police (Center for Problem-Oriented Policing, 2012). Community-oriented policing is especially useful in neighborhoods where residents typically distrust the police or fear retaliation for reporting crimes (Wilson & Kelling, 1982). The broken windows theory influenced CPTED theory by presenting the argument that a well-maintained physical environment has the potential to reduce and prevent criminal activity in the community. It also reinforced the concepts of natural surveillance and territoriality, which became core principles in the study of place-based crime prevention.

Crime Prevention through Environmental Design (CPTED) is a multi-disciplinary approach to crime deterrence and prevention through intentionally altering certain elements of the physical environment. CPTED is one of the central approaches of place-based crime prevention; place-based crime prevention theorizes that the physical environment influences the behavior of its users, and therefore the environment can be manipulated to reduce the incidence and fear of crime, thereby improving the quality of life (Schneider & Kitchen, 2002). In addition to CPTED, place-based crime prevention has three other components, including defensible space, situational crime prevention, and environmental criminology. These four approaches, while developed independently, contain mutually supporting concepts and often overlap during practical applications (Schneider & Kitchen, 2002).

“Crime Prevention through Environmental Design” was first coined by C. Ray Jeffrey, a renowned criminologist from Florida State University. His first work, “Crime

Prevention through Environmental Design,” was published in 1971 and offered a unique perspective of integrated systems to crime-related study (Robinson, 1996). Jeffrey developed his theory based on experimental psychology represented in modern learning theory on the premise that the physical environment can produce either pleasurable or painful experiences, which in turn have the capacity to alter the behavior of potential offenders (Robinson, 1996). Jeffrey further developed the CPTED model in his 1990 publication, “Criminology: An Interdisciplinary Approach”. His 1990 publication discusses the integrated systems perspective, which connects two critical elements of CPTED through a biological-psychological approach; the place where the crime occurs, and the person who commits the crime (Robinson, 1996). This means that behavior can be manipulated by altering the external, physical environment of the place, and/or the internal, psychological environment of the offender.

Defensible space is another place-based crime prevention theory that is often used in connection with CPTED. The theory of defensible space was developed by respected architect Oscar Newman in 1972, and focuses on creating secure physical environments for residential uses. Defensible space is largely based on the concepts of territoriality and natural surveillance, which are also major CPTED principles. The goal of defensible space is “to release the latent sense of territoriality and community among inhabitants so as to allow these traits to be translated into inhabitants’ assumption of responsibility for preserving a safe and well maintained living environment” and to “increase the potential for residents to see and report likely offenders, thereby enabling residents to control the physical environments in which they reside” (Newman, Design Guidelines for Creating Defensible Space, 1976).

Modern CPTED theory focuses on the following fundamental principles, which were first presented by Oscar Newman and C. Ray Jeffrey in their respective works: surveillance, boundary definition, access control, maintenance, and activity support. Newly incorporated into CPTED theory are principles relating to space and place management. These principles may be approached through natural, organized, or mechanical design and management strategies. It is not uncommon for all three approaches to be employed simultaneously, as they are often complementary of each other (Schneider & Kitchen, 2002). CPTED focuses primarily on the natural approach, which is facilitated by the physical design of a location, rather than organized, which is conducted by people such as police or guards, or mechanical, which is facilitated by electronic or mechanical devices such as closed-circuit television (CCTV) monitoring systems (Schneider & Kitchen, 2002). The natural approach is favored because it is believed to be most cost-effective, as well as the most sustainable (Schneider & Kitchen, 2002). These principles and strategies continue to be utilized today due to their flexibility (Llewelyn Davies, 2004). Flexibility, or adaptability, is essential as place-based crime prevention, including CPTED applications, must be tailored to fit the context of the specific location, in terms of both the physical environment and the social environment (Llewelyn Davies, 2004). The reason that CPTED applications must be tailored to fit the given locality is because of the complex nature of how, where, and why crime occurs.

CPTED and other crime-prevention and crime-reduction theories are not without criticism. One of the main issues presented by scholars and practitioners is that CPTED does not actually reduce or prevent crime, but rather displaces it to other areas (Robinson, 1996). In terms of criminal activity, displacement means that crime has not

actually declined, but rather moved to another area. There is still the same amount of criminal activity, but in a different location. For example, consider a scenario in which local authorities have decided to concentrate on a particular problem, such as drug activity or prostitution. The target area is then subject to increased police presence, along with other methods of enforcement, such as undercover stings or raids. Over time, the area becomes less desirable for criminal activity because of the reduced opportunity and increased risks. The involved agencies deem the program a success because crime has been reduced in the target area. However, the problem has not actually been solved, but rather pushed out into a new area where the opportunity exists and risks are lower. The cyclical nature of criminal activity, policing, and displacement is one of the reasons why it is so difficult to find a real solution to reducing or preventing criminal activity.

The concept of displacement is based on rational choice theory and the role of opportunity in crime (Clarke, 1997, 2002). Rational choice theory tries to understand crime from the perspective of the offender. Developed by criminologists and professors Ronald V. Clarke and Derek B. Cornish, rational choice theory asks the following questions: What is the offender seeking by committing crime? How do offenders decide to commit particular crimes? How do they weigh the risks and rewards involved in these crimes? How do they set about committing them? If prevented from committing them, what other crimes might they chose to commit? (Cornish & Clarke, 1986) Essentially, this means that offenders will continue to commit crimes because they will continue to find opportunities. If an area no longer provides these opportunities, criminals will find another location that is still vulnerable (Clarke, 2002).

Additionally, CPTED is based on the concept that the built environment is largely responsible for the opportunity to commit crime, and therefore, it should be possible to manipulate the built environment to reduce or prevent crime. This assumption ignores the psychological components of criminal activity (Clarke, 2002). While it is accepted that the physical environment is responsible for at least some part of an offender's decision to commit a crime, it is not the sole factor. A person who commits a crime has the intent to offend regardless of the environment; the criminal will find the opportunity to offend because they have already decided to act outside legal means (Clarke, 2002).

Another criticism is the lack of evidence that CPTED is actually the cause for crime reduction or prevention in an area (Clarke, 2002). It may be impossible to prove that CPTED policies and installations are the reason for reduced criminal activity because it is expensive and difficult to measure their effectiveness. The actual impacts of CPTED applications are difficult to prove because of the multitude of factors that influence levels of criminal activity. Socioeconomic and demographic changes can impact the rates of criminal activity just as much, if not more, than elements of the physical environment.

Despite these criticisms, CPTED has been widely accepted as a valid and valuable tool for municipalities around the world to reduce or prevent crime in their communities (UN-HABITAT, 2007). Scholars and practitioners continue to explore CPTED theory and develop new applications that address issues in both the built and social environments. CPTED is typically used in conjunction with other anti-crime policies and practices, such as community-oriented and problem-oriented policing, and is typically seen as a complement to standard land use regulations. There is no

evidence that properly researched and implemented CPTED applications are detrimental to a locality.

Practical Applications of CPTED Principles

One key component of CPTED principles and other crime-prevention theory principles is that they can be applied in practical, real-life settings. CPTED principles are flexible in that they may be adapted to suit the local context, and that they can work in conjunction with a number of other planning theories and strategies. CPTED applications are unlikely to have negative impacts when implemented, and are considered complementary to other design and management strategies. These principles can also set up a framework for the planning process by guiding design and management strategies based on the overarching theme of crime-prevention. CPTED design principles can be adapted to fit within the architectural and aesthetic style of the development, and offer the additional enhancement of being designed from a perspective of safety. CPTED management strategies operate in a similar fashion, focusing on creating legitimate activity on the site and maintaining the design elements to enhance the quality of life for users and residents.

CPTED Applications by Local Governments

CPTED has gradually become part of the mainstream planning process as more municipalities start to focus on the quality of life of their communities from a more multifaceted perspective. Advantages in technology and design allow for more flexibility in CPTED applications. This flexibility makes CPTED attractive to planners and developers because these applications can be cost-effective and aesthetically pleasing, as well as effective in reducing and deterring criminal activity (Llewelyn Davies, 2004). Local governments can control the location, use, and style of development through land

use codes, design regulations, and various planning ordinances. One way a municipality can implement CPTED and other crime-prevention techniques is through including CPTED into their codes and other land use legislation. Many local governments have implemented CPTED ordinances in order to address crime and anti-social behavior. In the United States, Sarasota, Florida, Tampa, Florida, and Tempe, Arizona, have implemented such policies and programs.

The City of Cincinnati, for example, has included CPTED in their most recent comprehensive plan. Part of this new policy includes a document titled “Tactics to Reduce Crime through CPTED: an Informal Brochure to Assist Property Owners”. This document states that “the City of Cincinnati has adopted problem solving as the primary strategy for addressing repeat, chronic crime and disorder concerns” (Cincinnati Police Department, 2012).

A brief overview of CPTED is presented along with an overview of the SARA model. SARA stands for “Scanning, Analysis, Response, and Assessment, and the SARA model is used frequently for site analysis and planning from a crime-prevention approach. The SWOT model, which was used in the research for this thesis, is often used as part of the “analysis” step. SWOT stands for “Strengths, Weaknesses, Opportunities and Threats,” and allows for exploration of both social and physical environments. The brochure published by the City of Cincinnati offers a checklist for landlords, property owners, and tenants, which is designed to offer a step-by-step review of the property to ensure maximum safety precautions have been considered. The checklist covers natural surveillance, exterior lighting, access control, entrances for buildings and the site, landscaping, security and signage, and maintenance. This

checklist is a valuable tool for the community because it promotes awareness and encourages safety as a priority in property design and management. This checklist can serve as a prototype for other communities interested in implementing CPTED applications. Many municipalities around the United States already have checklists and CPTED regulations in their codes, which cover topics such as mixed-use developments (San Diego Police Department, 2005) and retail districts. While the City of Cincinnati's CPTED guide for property owners is currently voluntary, other municipalities have implemented CPTED checklists into their requirements for site plan reviews. The City of Federal Way, WA, has implemented a CPTED checklist as part of their code. This checklist is very thorough and requires an inspector to sign off on each element before the plan may proceed through the development review process (City of Federal Way, 2011). Copies of the checklists developed by the City of Cincinnati and the City of Federal Way can be found in Appendix C. It is important to note that CPTED checklists must be adapted to the local context. What works for one city may not work for another, and checklists developed without being tailored to fit the local context may create additional problems.

Also part of the City of Cincinnati CPTED guidelines is a sample lease document. This lease is for residential properties, which include apartments, houses, and garages, and features the typical elements of a standard lease with an addendum for "drug-free housing" (Cincinnati Police Department, 2012). This addendum requires the tenant to agree to and abide by the following provisions:

1. Tenant, any member of the tenant's household, or a guest or other person under the tenant's control shall not engage in criminal activity, including drug-related criminal activity, on or near the project premises. "Drug-related criminal activity" means the illegal manufacture, sale, distribution, use, or possession with intent to manufacture,

sell, distribute, or use, of a controlled substance – as defined in Section 103 of the Controlled Substances Act (21 U.S.C. 802)

2. Tenant, any member of the tenant's household, or guest or other person under the tenant's control shall not engage in any act intended to facilitate criminal activity, including drug-related criminal activity, on or near project premises.
3. Tenant or member of the household will not permit the dwelling unit to be used for, or to facilitate, criminal activity, including drug-related criminal activity, regardless of whether the individual engaging in such activity is a member of the household or a guest.
4. Tenant or member of the household will not engage in the manufacture, sale, or distribution of illegal drugs at any location, whether on or near the project premises or otherwise.
5. Tenant, any member of the household, or a guest or other person under the tenant's control, shall not engage in acts of threats or violence, including, but not limited to, the unlawful discharge of firearms, on or near project premises.
6. Violation of the above provisions shall be a material violation of the lease and good cause for termination of tenancy. A single violation of any of the provisions of this addendum shall be deemed a serious violation and a material noncompliance with the lease. It is understood and agreed that a single violation shall be good cause for termination of the lease. Unless otherwise provided by law, proof of violation shall not require criminal conviction, but shall be by a preponderance of the evidence.

This lease addendum provides a legal basis for the eviction of tenants who engage in illicit activity, which is critical for the lease to be effective. Without the legal provisions, these statements would have little value except as suggested guidelines for tenant behavior. Other municipalities and residential developments have enacted similar lease policies, which are often complementary to other no-tolerance policies such as drug-free zones near schools. These lease provisions may be written in accordance with public housing regulations and other government-provided financial assistance programs as additional measures to promote safety and deter illicit behaviors (Cincinnati Police Department, 2012).

The City of San Diego, California, offers a set of design guidelines for CPTED in urban village centers. The paper, published in 2005 by the San Diego Police Department Neighborhood Policing Resource Team, presents an introduction to CPTED theory and how CPTED can be used to prevent and reduce crime in urban village centers. An urban village center is a mixed-use center of a neighborhood, where residential, commercial, and civic uses are all present and integrated (San Diego Police Department, 2005). The guidelines are very detailed and cover a wide range of design elements, and discuss the benefits of promoting mixed-use developments over isolated, Euclidian-style zoning. The design guidelines in the paper are presented for streets, sidewalks, outdoor public spaces, residences, office buildings, mixed-use buildings, public parking facilities, and shopping centers. The paper also presents CPTED guidelines for common design elements such as landscaping, fencing, alleys, gates, emergency access, and signage, among others.

This publication offers design guidelines, which means the elements and features are optional, not required. If desired, the local planning agency could adopt these guidelines into their municipal codes, which would then require developers to follow the guidelines instead of presenting them as suggestions. The recommendations presented in this paper are very thorough, covering almost every aspect of the built environment. This publication serves as an excellent example for other municipalities, especially in relation to areas of mixed-use development. Our proposed redevelopment plan would qualify the site as an “urban village center” due to its location and proposed uses, which makes this publication especially useful for our work.

Connections between Design and Management

In order for a project to evolve from concept to construction, there are a number of steps that must be completed throughout the planning process. Two main components of all development projects are design and management. The design component involves the physical layout, structure, and appearance of the development site and includes features such as buildings, landscaping, parking areas, and driveways. The management component involves the use and maintenance of the physical site features, as well as controlling and manipulating activities and behaviors relating to the site and its potential users. The design and management of a site are connected at a fundamental level, intertwined and codependent throughout the planning process and beyond. The site should be designed in a way to facilitate management, and the site should be managed to promote and preserve the integrity of the design.

The checklists, lease addendums, and other practical applications of CPTED offer a solid foundation for our recommendations. The design guidelines published by the City of San Diego Police Department and the “Safer Places” guidebook published by Llewelyn Davies, among other publications, present both design and management strategies, which show the importance of considering the connections between the design and management of a site.

Safer Places: the Planning System and Crime Prevention

The Office of the Deputy Prime Minister of England published a guidebook, researched and written by the international architecture and planning firm Llewelyn Davies in 2004, “Safer Places: the Planning System and Crime Prevention,” which discusses the research and application of crime prevention attributes in terms of creating safer, sustainable communities (Llewelyn Davies, 2004). This guidebook

presented a number of case studies relating to the application of crime-prevention principles in various settings throughout the United Kingdom, such as residential developments, town centres, and public transit stations. Additionally, the guidebook outlined a set of seven attributes, based on the five core principles of traditional CPTED theory, which provide guidance on adapting crime-prevention features to fit within location-specific contexts. The seven attributes are access and movement, structure, surveillance, ownership, physical protection, activity, and management and maintenance (Llewelyn Davies, 2004).

This work is immensely valuable in terms of understanding and developing practical applications of crime-prevention principles. The guidebook provides case studies, several of which were studied in turn for this thesis, which show the intentional inclusion of crime-prevention design and management features and strategies in various types of development. Many developments happen to have features that may deter or prevent criminal activities or anti-social behavior, but these elements are most effective when there is intentional implementation (Llewelyn Davies, 2004). Design features and management strategies that are implemented intentionally are more likely to work because they have been carefully considered in terms of how each feature and strategy relates with each element of the site (Llewelyn Davies, 2004).

“Safer Places” is particularly valuable due to the way each of the seven CPTED principles are presented. The guidebook defines each attribute, presents evidence from case studies where each attribute was implemented, and lists “best practice” examples of successful implementations with images of these features. Additionally, the guidebook features a “checklist” for implementation, which consists of various considerations to

bear in mind throughout the planning process such as “do all routes lead somewhere people want to go, and are all routes necessary,” “will those most likely to observe any criminal or anti-social behavior respond appropriately” and “are parked cars visible but secure” (Llewelyn Davies, 2004). One of the most interesting inclusions is a “think criminal” section for each attribute, which presents a list of thoughts a potential offender may consider. Some examples include “is it easy for people to become lost or disoriented”, “can criminals operate, including travelling to and from the location, without fear of being seen”, and “how much effort does it take the offender to commit the crime, how much risk does the offender perceive when contemplating a particular crime, what resources are available for the offender to commit the crime (such as tools, time, and weapons) and how much reward does the offender anticipate” (Llewelyn Davies, 2004, p. 14). The “think criminal” section is a valuable tool for planners and other professionals involved in the planning and development process because it allows for an additional perspective, one which the typical law-abiding person may not be aware of or consider during the planning and development process.

While CPTED, defensible space, and other crime-prevention theories are widely accepted and used by many governments, law enforcement offices, and private design firms, there are no universally-applicable strategies. The majority of “gained knowledge” of CPTED and other crime-prevention applications is highly context-sensitive due to the differences in cultures and geographical locations (Llewelyn Davies, 2004). Measuring the results of CPTED applications can be difficult, if not impossible (Llewelyn Davies, 2004). One complication in particular to quantifying successes or failures of CPTED applications is that crime problems and their contexts change. There are numerous

factors that can impact the location being studied, such as changes in land use, changes in demographics or socioeconomic conditions, changes in development policies and programs, changes in traffic routes, and even the possibility that offenders may adapt to the existing crime-prevention methods (Llewelyn Davies, 2004). The case studies found in the “Safer Places” guidebook offer examples of particular situations and crime-prevention applications, which can then be adapted to suit the local context.

The “Safer Places” guidebook discusses the program “Secured by Design (SBD),” which was established in 1989 by the Association of Chief Police Officers (ACPO) in the United Kingdom. The ACPO is an “independent, professionally led strategic body” which works “in the public interest, in equal and active partnership with Government and the Association of Police Authorities” (Association of Chief Police Officers, 2011). The ACPO “leads and coordinates the direction and development of the police service in England, Wales, and Northern Ireland” and “in times of national need, ACPO, on behalf of all chief officers, coordinates the strategic policing response” (Association of Chief Police Officers, 2011 p. 1). Secured by Design is the corporate title for a group of National Police Projects focusing on the design and security for new and refurbished homes, commercial premises, and car parks, as well as the acknowledgement of quality security products and crime prevention projects (Association of Chief Police Officers, 2011). The company operates a licensing scheme and includes member companies who are entitled to use the term “Police Preferred Specification” and the Secured by Design logo on products. Products certified by the ACPO and SBD have been tested and meet quality standards as specified by the ACPO (Association of Chief Police Officers, 2011). By creating a system of quality

standards, developers and other agencies can trust that the products and programs bearing the SBD seal and logo are proven to work and are of a higher quality than other available products and programs. Secured by Design is based largely on CPTED, defensible space, and other crime-prevention theories. The products and projects which earn the approval of the ACPO and SBD are designed to satisfy at least one of the CPTED principles, such as surveillance or access control.

Also discussed in the “Safer Places” guidebook and found throughout the United Kingdom is the role of the Architectural Liaison Officers (ALO). An Architectural Liaison Officer is a member of a local police agency who specializes in crime prevention techniques. The ALO advises police and development agencies on crime risks and designing out crime for buildings and surrounding areas (ecowise, 2012). In addition to physical security measures, the ALO considers defensible space, access, and crime and movement generators, all of which can contribute to the reduction of crime and disorder (ecowise, 2012). Both SBD and ALOs have shown to be successful in the United Kingdom in their respective roles (Armitage & Monchuk, 2009). These concepts could be adapted and implemented in the United States to supplement existing crime-reduction and crime-prevention techniques and strategies.

The “Safer Places” guidebook also provides a link to an interactive website featuring various land use scenarios such as car parks, residential communities, and commercial developments, among others. It was developed by the ACPO to show poor examples of these land use scenarios, as well as examples of improvements made by implementing SBD principles and products (Secured by Design, 2004). This is an extremely valuable tool, as it allows the user to visualize a real site, as well as

interactively explore improved sites after SBD implementations. The toolkit is an excellent “best practice” example for localities interested in developing a program to inform agencies and citizens on how SBD, CPTED, and other crime-reduction and crime-prevention elements can be implemented in their respective communities.

Case Studies

The following case studies were taken from the “Safer Places” guidebook (Llewelyn Davies, 2004) on the basis of having similar features as the selected site. While none of the case studies are exact matches for the site in terms of size, uses, and problems, all three feature similar characteristics of the site. These case studies include Clarence Mews, a small mews in Hackney, London featuring residential and commercial uses; Gravesend Town Centre, a large mixed-use development in Kent, England; and Stroud Town Centre, a medium-sized mixed-use development in Gloucestershire, England.

Clarence Mews – Hackney, London, England

The first case study, Clarence Mews, is a 0.1 hectare (0.24 acre) site located in Hackney, London. This project was selected for study because of the uses located within the site and the criminal activity on and around the site. The Clarence Mews are described as inner-city mews; a mew is a building which at one time contained horse stables and carriage homes on the first and second floors, respectively. These buildings have since been converted into mixed-use dwellings, typically featuring retail or commercial offices on the first floor, and small, but often upscale, residential living space on the second floor (Llewelyn Davies, 2004). These mews had developed a reputation for anti-social behaviors, especially break-ins, drug dealing and drug use. Between 2000 and 2002, a privately-funded initiative led by Cazenove Architects

redeveloped the mews by improving the environmental quality through landscaping improvements and rehabilitation of the structures. The design approach for the project combined business and residential uses to facilitate surveillance and increase legitimate uses. Cazenove Architects consulted an Architectural Liaison Officers (ALO) during the design stage for advice on the nature of crime in the area, possible security measures, and how development could improve the area (Llewelyn Davies, 2004). The Planning Authority of the London Borough of Hackney, the Metropolitan Police, and neighbors from surrounding residences realized the potential of the project and took active roles in the planning and development process.

The project proved to be an instant success; reports of disorder fell by 19% between 1999/2000 and 2001/2002 (Llewelyn Davies, 2004), and the project was featured in the 2002 Housing Design Awards. Clarence Mews was transformed into a modern, vibrantly-colored, mixed-use neighborhood. The active frontage at the center of the mews combined with terraces overlooking the public area from the second floors provided natural surveillance during the day and night. The first floor was outfitted with larger windows and doors, which are covered at night by interior steel shutters. These shutters are designed to avoid creating a blank street frontage, as well as to avoid the unattractive appearance of barred windows. The ground floor is set back 1 meter from the street, while the second floor extends out into the street, deterring potential climbers. The improvements left the area unattractive to anti-social activities, raised property values, attracted new businesses and residents, and encouraged nearby property owners to make similar changes (Llewelyn Davies, 2004).

This case study provides evidence that the new development in the mews raised the attractiveness and usability of the area, and encouraged further rehabilitation of nearby properties. The new buildings created a frontage onto the mews, which provided seclusion and security for previously vulnerable private gardens. The project also presents evidence that attention to details can provide additional security. In this case, the addition of windows to previously opaque doors and increasing the size of windows on building frontages increased the ability to identify visitors before they enter a premise. This project was funded solely by private sources, which shows that government intervention is not always necessary in terms of financing projects, but the support of the municipal government can be beneficial to the project. The project also showed the benefits of consulting an expert, in this case, the ALO. By consulting an expert, the Cazenove firm was able to develop a better understanding of the issues and formulate more comprehensive plans for the area.

Many steps taken by the Cazenove Architects to improve the Clarence Mews can be implemented in our selected site. Considering small details in the design and management strategies of the site can have large impacts on safety and viability. Developing an agency or function similar to the ALO can provide an added resource to the community as a whole. The Clarence Mews project also gives an example of a small development serving as a catalyst for community-wide improvements, which is one of the goals set of this thesis.

Gravesend Town Centre – Kent, England

The Gravesend Town Centre, located in Kent, England, is a 49 hectare (121.08 acre) site featuring a mix of residential, commercial, and heritage buildings. The Gravesend Town Centre area began to suffer after the decline of nearby port-related

activities. Many of the buildings suffered from dereliction, vacancy, and were in various stages of decay. Community members lacked a sense of pride in their neighborhood, and crime was increasing (Llewelyn Davies, 2004). A public-private partnership was formed in 1983 to address the growing list of concerns, and with the help of government funding matched by local sources, a regeneration program was developed. This program included conservation and restoration of heritage buildings; development proposals for sites vulnerable to crime, such as parks; reintroduction of housing into the riverside and town center, including “living over the shop”; and creating pedestrian-priority shopping streets, which include good quality paving and street furniture (Llewelyn Davies, 2004). An essential component of the regeneration program was the formation of the town center management group, “Towncentric” (Llewelyn Davies, 2004). The management group coordinates services, including radio contact between retailers and police; closed-circuit television (CCTV) surveillance; daily street cleaning; town center wardens that act as a governing body; police patrols; informal collection and analysis of data pertaining to crime and site use; and the introduction of the “G-SAFE” crime initiative, which focuses on creating better relationships between the police, residents, tenants, and visitors of the town center (Llewelyn Davies, 2004).

The project has proved to be a successful implementation of crime-prevention applications and a public-private partnership. Between 1999/2000 and 2001/2002, shop theft was reduced by 19% and criminal damage by 8% (Llewelyn Davies, 2004). The reduction in crime is attributed to active measures, such as radio communication between tenants and police and CCTV, and passive measures, including the restoration of derelict buildings and implementing good quality urban design features. The

improved urban fabric led to an increase in local pride, which increases the likelihood of residents maintaining their properties and notifying authorities of possible criminal offenders (Llewelyn Davies, 2004). This increased civic pride is reflected in the absence of graffiti and litter in the town center. The derelict buildings had offered opportunities for criminal activity and shelter for illegal acts, which was reduced as the area repopulated and was afforded more natural surveillance. Natural surveillance was also supported by the increase of activity in the area throughout the day and night, which included introducing a 24-hour grocery store in one of the formerly vacant buildings (Llewelyn Davies, 2004). Another example of activity support and natural surveillance was the inclusion of seating and play areas in shopping facilities.

This site provides a number of features that can be utilized in our selected site being studied for this thesis. Green Township has a high percentage of its population under the age of 18, so offering activities and uses for children and adults in the same location would benefit families. The “Towncentric” management group could serve as a model for a management group for the site. This would reinforce the connections between site design and management that are critical for success, which is one of the main focal points of the proposed redevelopment plans. Increasing natural surveillance through incorporating a mix of commercial and residential uses is also a recommendation for our site, which the case study of Gravesend Town Centre shows can be done successfully at various levels of density and location.

Stroud Town Centre – Gloucestershire, England

The Stroud Town Centre is a 14.7 hectare (36.32 acre) mixed-use development located in Gloucestershire, England. The Stroud Town Centre had faced issues with high levels of criminal activity and anti-social behavior, including street drinking,

panhandling, drug addiction, and shoplifting (Llewelyn Davies, 2004). The redevelopment process began in 1997 after a variety of interested parties, including the local government, police force, tenants, residents, and the Town Centre Crime and Disorder Group, formed a task force (Llewelyn Davies, 2004). This public-private partnership was instrumental in the development and passage of new legislation regarding street drinking. This new bylaw, passed in 2002, made street drinking illegal and enacted a “Behave or be Banned” policy for venues with frequent offenses (Llewelyn Davies, 2004). The Home Office funded CCTV for the Town Centre, which provided mechanical surveillance to support instances where natural surveillance was insufficient.

The Stroud Town Centre approached the planning process in a holistic manner. A combination of streetscape improvements, CCTV, and enforcement measures has changed the nature of the town center by reducing criminal activity and anti-social behaviors. Another priority for Stroud Town Centre was the introduction of good quality street lighting to eliminate dark corners and improve visibility without creating blind spots. These physical improvements were complemented by efforts to improve the social environment of the Town Centre, by increasing legitimate and inviting activities such as a farmer’s market, special events with activities for children and adults, and through revitalizing and repopulating the derelict buildings with new shopping and living opportunities. The Town Centre’s revitalization process also focused on building the identity of the area by promoting its civic design strengths and theming different quarters with locally-relevant motifs (Llewelyn Davies, 2004). One special feature of the Stroud Town Centre redevelopment was the construction of a nearby skate park, which

removed a perceived nuisance of teenage skateboarders from the actual town center area (Llewelyn Davies, 2004).

The Stroud Town Centre redevelopment process is considered a successful implementation of CPTED and other crime-reduction applications, as well as a success in revitalizing the social environment of the area. The improvements made possible by the public-private partnership have reinforced a strong feeling of community for the residents and tenants. The street furniture and other design elements are of high quality and maintain a consistent theme, which provides a sense of place. Young people still congregate in the town center on weekend evenings, but there are far less complaints of mischief and inappropriate behavior, especially due to the construction of the nearby skate park and introduction of other activities (Llewelyn Davies, 2004). The addition of new residential units and increased investment in commercial activity has increased legitimate activity and natural surveillance at all times of day and night, in turn lowering opportunities for criminal activity. Stroud Town Centre's improvements are reflected in crime statistics: between 2002 and 2004, there were no robberies; reports of burglary reduced from 51 to 25; shop theft reduced by 25%, and car-related crimes remain very low (Llewelyn Davies, 2004).

Implementing a consistent theme and high-quality design standards are two features that are included in the recommendations for the selected site. By creating a sense of place, community members can take pride in the site and develop a sense of ownership, which is a critical element for increasing natural surveillance in and around the site. The Stroud Town Centre is another positive example of public-private partnerships, which could be beneficial to the selected site and Green Township

community. Creating and maintaining a healthy mix of commercial, retail, and residential uses, as shown by the Stroud Town Centre, could be beneficial to the selected site and surrounding community. Increasing crime-prevention applications, such as proper lighting and landscaping, are major components of the proposed site redevelopment recommendations. These applications are shown to be successful in the Stroud Town Centre, which serves as evidence for application in the recommendations for our selected site.

Summary

Our review of the existing literature pertaining to the theory of Crime Prevention through Environmental Design, its practical applications, and case studies of successful CPTED implementations has given us a foundation for our recommendations. Practical applications of CPTED theory are intended to serve as complementary strategies to other planning and design principles, but are also valuable tools in their own right. Practical applications of CPTED principles are flexible and adaptable to the local context, low-cost, and able to be implemented into new and existing construction. While it is still difficult to prove or measure the actual effectiveness of CPTED applications, there are no known negative consequences of implementing CPTED into the design and management strategies of a community. For these reasons, we have elected to implement CPTED into our design and management strategies for our proposed site redevelopment, as well as our recommendations for amending the existing planning policies for Green Township and Hamilton County.

CHAPTER 3 METHODOLOGY

This chapter provides a detailed description of the methodology used to analyze and evaluate the various data sources concerning this research. The focus of this thesis is to gain a better understanding of CPTED theory, evaluate principles and policies for practical applications of CPTED, and explore possible connections between the design and management of a site. The methodology used in this thesis is based on qualitative research methods, including reviewing case studies, practical applications of CPTED theory principles, data collection, and site analysis. The analysis area for this thesis includes the selected site, as well as the surrounding communities of Green Township and Hamilton County.

Practical Applications of CPTED Theory

As discussed in the literature review in Chapter 2, CPTED theory involves the manipulation of the built environment to influence the behavior of its users, particularly to encourage legitimate uses and deter criminal activity and other anti-social behaviors. While the five core principles of CPTED are applicable universally, their practical implementations are highly location-specific. In other words, CPTED applications must be tailored to fit within the local context. This flexibility is one of the benefits of CPTED, as it allows for adaptability and creativity. For this thesis, we consulted studies and guidebooks published by a number of government offices, which are further discussed in the literature review and in our recommendations. These publications discuss the theory of CPTED, possible benefits and limitations, and practical applications through examples of “best practices” and case studies.

Case Studies

These selected studies were obtained from “Safer Places: the Planning System and Crime Prevention,” a study published by the Office of the Deputy Prime Minister of England in 2004. We selected these case studies due to similarities with our selected site. The case studies vary in size of development and scope of intervention, but have comparable issues and qualities with the site under review for our work. The case studies reviewed for this thesis are for Clarence Mews, Gravesend Town Centre, and Stroud Town Centre. These sites are all located in England, and demonstrate successful implementations of CPTED principles tailored to fit within the local contexts. Another reason for selecting these particular case studies was the use of public-private partnerships and community involvement. To review these studies, we researched the history, the methods utilized to form focus groups and development teams, and the CPTED principles implemented for each site. A detailed discussion of each case study is presented in the literature review found in Chapter 2.

Data Collection and Analysis

To gain a deeper understanding of the site and surrounding community, the author collected and analyzed data pertinent to the built and social environments the study area. This data includes demographic and economic information obtained from the U.S. Census Bureau, crime report statistics from the Hamilton County Sheriff’s Office and Green Township Police Department, as well as observations from a SWOT analysis of the site. These data sources provide a foundation and justification for exploring CPTED theories as part of the proposed redevelopment plans.

Demographic and Economic Data

Data pertaining to the demographic and economic conditions of the site, Green Township, and Hamilton County were obtained from the U.S. Census Bureau. The U.S. Census Bureau provides a program called “American FactFinder,” which allows the user to search the Census database through a variety of filters, such as topics, industry codes, and geographies. To obtain data for Green Township, the author employed the “search by geography” filter. In addition to Census data for Green Township, the author collected the same categories of demographic and economic data for Hamilton County to serve as a comparison. Data was available from the 2000 and 2010 Censuses, which limited the scope of analysis to a shorter length of time. The categories of information obtained from the Census data include age, gender, race, housing, educational attainment, employment, income, availability of vehicles, and mean travel time to work. These categories were selected for study because they provide insight for the communities’ social environments. These categories also serve as indicators of how the social environment relates to the built environment, which is one of the core questions addressed in this thesis. Demographic data is presented for Hamilton County and Green Township in Table 4-1.

Crime Data

In addition to demographic and economic data, crime data was gathered for Green Township and Hamilton County. Gathering and analyzing crime data is a critical component for this research, as it provides the justification for our CPTED-based recommendations. Green Township’s Police Department provided data for the site and the Township as a whole. The Hamilton County Sheriff’s Office was consulted for

county-wide data, which can be compared against Green Township's crime data to provide geographical context on levels of criminal activity.

To obtain this data, the author contacted the Hamilton County Sheriff's Office and Green Township Police Department on July 17, 2012. Liaisons for both law enforcement agencies provided the author with crime reports and statistics. These reports provided data and analysis of crime reports in Hamilton County and Green Township from 2000 to 2012. The provided reports broke down reported crimes by type of offense and compared rates between communities in generalized yearly statistics, which provided a sufficient level of information for this thesis. The Green Township Police Department provided the author with an additional detailed database of crime reports for the site and immediate surroundings, which allowed for an additional level of analysis. This database included the date, type of offense, and address of each crime report. This data included reports from January 2010 through June 24, 2012. The available crime statistics allowed us to compare the reports against the demographic data from the U.S. Census Bureau. The corresponding time frames permitted observation of relationships between the demographic, economic, and crime data sources. These data sources provide a partial picture of Green Township's social environment. This data is presented and analyzed in detail in Chapter 4.

Site Analysis

To thoroughly analyze the site, we needed to find a model which would permit the exploration of the social and built environments. Analyzing both environments is critical to this research because the site's issues are not specific to one particular element in either environment. Additionally, many of the issues are not site-specific. During the course of our research and analysis, we discovered that the issues of the

site expand into Green Township and further into Hamilton County, which required an analysis model to allow for examination at a larger scale. For these reasons, we opted to utilize the SWOT model. SWOT stands for “Strengths, Opportunities, Weaknesses, and Threats.” This model is used in many types of research in various fields of study. After performing the SWOT analysis, the author was able to compare these findings against demographic, economic, and crime data and determine if there were any connections or correlations between the built and social environments, and what may be the cause of the site’s and community’s issues. To find the strengths, weaknesses, opportunities and threats, the author conducted a visual analysis of the site on multiple occasions. Multiple site visits and reviews were conducted to determine if any issues were time or date specific. The author visited the site on Monday, September 3, 2012 at 10:00 am; Thursday, September 11, 2012 at 6 pm; Saturday, September 13, 2012 at 9 pm; and Sunday, September 20, 2012 at 12:00 pm. The author observed similar situations and issues during each of the four site visits, confirming that the issues were likely not caused solely by the time of day or day of the week. Chapter 4 provides a detailed description of observations and findings from the SWOT site analyses.

CHAPTER 4 FINDINGS

This chapter discusses the collection and analysis of data pertaining to the selected site and the surrounding communities of Green Township and Hamilton County. The data provides insight on the conditions of the site and the surrounding communities, and serves as the basis for our recommendations. Our data sources examine the built and social environments of the area, which is critical to gaining a more complete understanding of the community and site's issues. Data collection and analysis revealed connections and interactions between the built and social environments, which will be discussed in detail. The built environment affects behavior at conscious and subconscious levels, which justifies the study and use of urban design theories, specifically Crime Prevention through Environmental Design. The social environment can be influenced by, and be the cause of the built environment's form and function. The following chapter presents our recommendations, which are based on our analysis of existing and relevant literature, best practice examples, case studies of similar developments focusing on CPTED applications, and the review of data relating to the site and the surrounding communities of Green Township and Hamilton County.

Built Environment

The built environment, also known as the physical environment, consists of the man-made features that provide the settings for human interaction and activity. The built environment includes features such as buildings, infrastructure, and open spaces. It can be modified and controlled through the use of plans and municipal codes, and has a significant impact on the quality of life of its users. To examine the built environment, the author conducted an analysis of the site using a SWOT model. To gain a deeper

understanding of Green Township’s built environment, the author examined the community’s urban design features, as well as the existing building stock and its uses located near the site.

Site Description

The selected site is located in Green Township, Ohio, a community in the southwestern corner of Hamilton County. Green Township is home to 58,370 people as of the 2010 U.S. Census. The site sits between Glenway Avenue and Werk Road, two of the major thoroughfares in the area. The site shares its eastern boundary line with the City of Cincinnati, which makes the area a “gateway” to Green Township for westbound travelers. The site is located in a “transitional” zone, which means that it shares characteristics of two different neighborhoods. The concept of a “transitional” zone is further discussed in an analysis of the Green Township community. Figure 4-1 shows a map of Hamilton County, with Green Township outlined in red. The site is marked by a blue star. Figure 4-2 shows a close-up view of the site, obtained from Google Maps. Figure 4-3 is a land use map of the site, with a list of the tenants currently occupying the buildings.

The site is zoned G-PUD, which means it is a “planned unit development”. Planned unit developments allow for greater flexibility in design and use of an area, which is beneficial for our proposed redevelopment. As currently developed, the site contains 6 superstructures, which are large buildings with multiple storefronts and tenants per building. These superstructures provide 418,938 finished square feet of retail and commercial space and are located around the exterior boundaries of the site. Complementing the buildings is over 240,000 square feet of surface parking space,

located in the middle of the site. The property reports from the Hamilton County Auditor can be found in Appendix B.

Aesthetically, the site leaves much to be desired. The buildings are nondescript concrete boxes; the parking lots are devoid of any landscaping and are sparsely lit by tall, glaring light posts. Signage is minimal, poorly placed, and lacking any sense of uniform design. Pedestrian paths are nonexistent, and vehicular driveways are so poorly defined that cars zoom across the ocean of pavement with reckless abandon. A number of improvements could be made with even the smallest effort, such as new planters, new and improved signage, or replacing the current light poles with new, decorative lamps. Better delineated pathways would reduce risks for pedestrians and drivers travelling through the site. Figures 4-7 – 4-14 provide images of the site.

Site Analysis – SWOT Model

To understand the site and its issues, the author conducted a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis. A SWOT analysis was chosen over other site analysis models because it allows the researcher to examine both positive and negative qualities of the site from a dual perspective of the social and built environments. The SWOT model was particularly effective because the site's issues do not stem from one particular element, but rather from a collection of elements involving design, management, and use. The author visited the site on Monday, September 3, 2012 at 10:00 am; Thursday, September 11, 2012 at 6 pm; Saturday, September 13, 2012 at 9 pm; and Sunday, September 20, 2012 at 12:00 pm. Multiple site visits were conducted to observe any differences in activity at different times of the day and different days of the week.

Strengths

One of this site's greatest strengths is its location. Considering the real estate mantra of "location, location, location," this is a major benefit for the tenants of the development. The site is surrounded by residential, mostly single-family with a small cluster of multi-family condominiums. The site benefits from the surrounding residential community because there is a built-in service need. People who live and work in the community require places to eat, drink, shop, and socialize, and typically prefer these places to be in close proximity to reduce travel times and expenses. There is a substantial stock of existing retail and commercial establishments within very close proximity to the site. The site sits between two major roads, Werk Road and Glenway Avenue, which allows for high visibility to potential users. The site is currently zoned "G-PUD" which allows for a mix of land uses and permits more freedom in site design and use mix. In addition to the site's location, the site itself is large enough to allow for expansion from its current build. At 29.4 acres, the site can permit multiple buildings, surface parking, green space or other types of outdoor gathering space, and pathways for both vehicular and pedestrian traffic. Topographically, the site is conducive to development due to the flat grade of the actual site. There is a steep hill on the northern boundary of the site, which is undeveloped with the exception of the driveway providing access to the site from Glenway Avenue. The site has no history of flooding or drainage issues.

Weaknesses

Unfortunately, the site has many more weaknesses than strengths. These weaknesses are present in both the physical and social environments, and some weaknesses extend outward from the site into the surrounding community.

The physical layout of the site is a major weakness. The buildings are “superstructures;” large, bland boxes of concrete and glass containing multiple storefronts. The buildings range in height from 12’ to 22’, but are all one-story with the exception of the structure containing Bally’s Total Fitness Gym. These buildings are positioned along the border of the site and are fronted by a massive asphalt parking lot. The site, as currently developed, has 418,938 square feet of finished retail space. The design and position of the buildings is typical of traditional big-box development.

The parking lot takes up the majority of the site, and is rather unfriendly for both pedestrians and drivers to negotiate. As the site is currently developed, it contains 240,000 square feet of paved asphalt parking space. If calculated using the standards set forth by the Hamilton County Zoning Regulations (Board of County Commissioners of Hamilton County, Ohio, 2010) with each parking space measuring 9’ by 23’, there are approximately 1,159 parking stalls on site. This equates to one parking space for every 361.5 square feet of finished retail space. There are no marked pathways or driveways, which is very confusing and dangerous. Without clearly marked right-of-ways, drivers experience a “free-for-all” feeling, which has led to a number of accidents. There are tall light posts scattered throughout the parking lot, but no landscaping. Landscaping in parking lots is not solely aesthetic; landscaping planters can denote boundaries between parking and driving areas, and can provide additional benefits such as drainage for stormwater.

Another weakness is the “generic” nature of the tenants located within the development. There are no “unique” retail opportunities; all of the establishments within the development exist in some form in nearby commercial areas. The commercial stock

in the surrounding community largely consists of “dollar” stores, national chain mega-retailers such as Target and Wal-Mart, and fast food or chain “family-style” restaurants such as T.G.I. Friday’s and Applebee’s. In regards to this thesis, we consider “unique” retail opportunities to be establishments that cater to specific wants or needs, such as specialty grocers, boutique clothiers, and hobby shops.

In addition to the type of tenants found in this development, another issue is the lack of stability in the development. With few exceptions, most businesses in the site do not survive very long in this location. This turnover in tenants is based on the author’s personal observation over the last 20 years of living nearby and visiting the site. Figure 4.3 shows a land use map of the site, with a list of tenants and their locations. With the exception of four tenants, all of the businesses located in the development at the time of publication have inhabited the site for less than 3 years. One observation in particular is the frequency of “seasonal” tenants, such as “Halloween Express,” which rent a vacant storefront for 2-3 months and then leave after the holiday or season. The high rate of tenant turnover creates a feeling of instability within the site. This instability prevents a sense of community from forming, and creates an opportunity for potential criminal activity as there is no sense of ownership or surveillance by the tenants.

The design of the site is another weakness. The site is very disconnected from the surrounding community, and seems rather out of place. There is limited visibility into the site from the street, which can unintentionally reduce possible customer traffic for tenants. This disconnection can create an unwelcoming feeling, as if the site is “off-limits” for outsiders. The architectural design of the buildings does not improve the atmosphere of the development, but rather enhances the discomfort of patrons. The site

is also designed in a way that is susceptible to criminal activity and disorder. The site does not have any features designed to deter illegal behavior, and the surrounding community has faced increasingly frequent instances of criminal activity. The most frequently reported crime on-site is theft, which is the most frequently reported crime world-wide (UN-HABITAT, 2007). The second-highest reported crime on-site is theft from automobiles. The high rate of theft can be explained as the site is mainly comprised of retail establishments. The issue of crime is further addressed in the “Threats” portion of the SWOT analysis.

Opportunities

One of the most important features of the site is its potential. As the site is currently developed, it does not appear to be a valuable asset for the community. Despite the poor site design and tenant issues, the site is located in an area which would support mixed-use development. The site is surrounded on three sides by single- and multi-family homes, with commercial uses to the north. The area is a transitional zone, which is further discussed in the analysis of Green Township. The size of the site and its flat topography can also be seen as opportunities, as these attributes are encouraging to development. There is also the potential for improvement at various levels of intervention. Even small changes in landscaping or signage would be beneficial to the site.

Because of the site’s location amidst existing residential and commercial uses, there is a solid “human” base. This means that enough people are already living and working in the area to support development, which is critical for the development to succeed. Potential users of the site have needs and wants. Residents of Green Township and the rest of the “West Side” (see Appendix A for discussion of “West

Side”) have a reputation for being “thrifty,” which is reflected in their shopping habits and lifestyles. However, this does not mean that the area should only offer “discount” and “dollar” stores. West Siders frequently travel to the East Side to obtain many retail goods, often at the specialty stores. Many West Side residents have expressed a desire for better retail opportunities through informal discussions and surveys with the author.

These informal discussions and surveys have also yielded the opinion that the area is in need of “change”. This change involves better urban design and more diverse retail offerings. Another major concern voiced by West Side residents was the issue of safety in commercial and residential areas. The crime rate in Green Township has risen by 10.51% since 2005 (Green Township Police Department, 2012), which the community has noticed but not yet taken formal action to resolve. The rising crime rate in Green Township is counter to the nationwide trend in the United States of decreasing crime. This proposed development has the potential to be a first, and major, step towards the change sought by many community members. This site provides an opportunity for specialty retail and can be designed in a sustainable, innovative fashion without drastically altering the character of the surrounding neighborhood.

Based on concerns regarding the rising crime rate in the community, this site provides an ideal opportunity to utilize CPTED and/or other crime prevention techniques. CPTED is an option for this site in particular because of the flexible nature of many practical applications of CPTED principles. These principles can be applied to the site as it currently exists, and serve as the framework for the proposed development plans. If CPTED is implemented in the current or proposed development, the process and plans could be used as an example for the surrounding community. CPTED is also

an option for the site because many of the elements of CPTED applications are low-cost and require little effort to implement and maintain. These CPTED elements are discussed in further detail in Chapter 5.

Another opportunity this site provides is a chance for local governments to “get it right”. Based on personal observations of political and development activity in the Greater Cincinnati area, the West Side has largely been ignored. There is little action by any governmental body in terms of improving communities on the West Side, and development is largely stagnant. This site provides an opportunity for a public-private partnership, which could help build rapport with the community. Local government could use this site as a building block for developing CPTED regulations and better design and development standards.

Threats

Threats to the site and surrounding community exist at varying levels of severity. These threats exist in a physical sense as well as in a less tangible form, and can impact the site in different ways. One of the most pressing threats to the site and surrounding community is the issue of criminal activity and anti-social behavior. As previously stated, crime is increasing in Green Township. The crime rate has risen by 10.51% since 2005, which is particularly alarming due to the nationwide trend of decreasing crime rates. In the City of Cincinnati, reports of criminal activity have been decreasing since 2000. In 2011, the City of Cincinnati had a reported crime rate of 81.6 per 10,000 residents, which is an improvement from the reported crime rate in 2001 of 86.6 per 10,000 residents. Based on a 2011 report from the Green Township Police Department, the most commonly reported crime for Green Township is theft, followed by criminal damaging / vandalism, burglary / breaking and entering, and assault (Green

Township Police Department, 2012). Crime, whether real or perceived, can be a major deterrent for potential users of a site. Green Township Police provided data that showed 51 reports of criminal activity in 2011 for the selected site alone. This is an increase of 49% from 2010, in which 26 crime reports were filed (Green Township Police Department, 2012). The report also indicated that criminal activity for 2012 was on pace to exceed the already high levels in 2011. The majority of reports were theft related, but there were also reported burglaries, assaults, and disorderly conduct. This level of criminal activity and the resulting perception of the area being unsafe have likely influenced the amount of traffic experienced by tenants. A nearby development, the Western Hills Plaza, faces similar issues. Western Hills Plaza is located on Glenway Avenue, roughly one-half mile northeast from the site. The development has faced many problems relating to crime, and business has suffered. This is evidenced by the rate of turnover in tenants and occasional vacancies due to issues with finding new tenants willing to come into the area. Several tenants have left the development because thefts and assaults were becoming so frequent. Western Hills Plaza should be considered for future study. Crime statistics and other crime-related issues are addressed at length in the following “Social Environment” section.

Another threat facing the site is the economic climate of the community. The recent recession impacted Hamilton County’s businesses and residents, forcing companies and families to cut back on spending. The current economic climate presents difficulties for developers and governments as well. However, it can be argued that the economy is always in flux and developers are always dealing with uncertainty. The instability of the economic climate may also have an impact on the amount of crime

in the area. The correlations between crime and the economy are further discussed in the analysis of crime data as part of the “Social Environment” section.

We previously discussed the issue of on-site navigation as a weakness, but we also consider it a threat. The site is not safe for pedestrian travel, as there are no marked driveways for vehicles and no marked paths or crosswalks with the exception of a sidewalk immediately adjacent to the buildings. Drivers are also at risk due to the lack of proper signage. There are several stop signs at various intersections in the site, but most drivers treat them as suggested stopping locations rather than mandatory. The entry and exit points of the site are also a threat. They are poorly designed and often confusing for people unfamiliar with the area. There are two points of entry along Werk Road, with driveways within 50 feet of each other. The eastern entry point is serviced by a stop light, while the western entry point is not. This has proved dangerous and traffic accidents are not uncommon when drivers leaving the western exit fail to yield to the traffic signal and oncoming drivers. This could be fixed with a fairly simple redesign and better signage. The entry point on Glenway Avenue is part of a busy three-way intersection, and is also poorly designed. The driveway is very steep and curved, making it dangerous during rain and snow. It is marked by a stop light, but there are driveways to other commercial properties immediately before and after the site entrance, which often leads to rear-ending accidents. As with the Werk Road entrances, the Glenway Avenue entrance could be made safer through a redesign, but it may be more complicated due to the involved intersections. A diagram of the site entrances and exits is shown in Figure 4-4.

Green Township

Green Township, as previously discussed, is a largely residential community. The site shares its eastern border with the City of Cincinnati. An interesting observation made by the author is that the site seems to form a very real boundary between the two communities. The area can be described as a “transitional” zone; the character of the community changes as one travels east or west from the site. “Transitional” zones are more ambiguous and more dangerous than clearly defined areas due to the lack of boundary definition and territoriality. As one travels west, the community becomes increasingly residential, with larger lawns and more expansive, newer homes. Traveling east, one observes smaller, older homes, increased density, and more commercial uses. There are clear transitions in both the built and social environments. These transitions can be observed by examining changes in demographic data and through visual inspection of the quality of buildings and other elements of the area’s urban fabric. The following sections present a detailed discussion of our research and analysis of the built and social environments of the site and the surrounding community.

Urban Design Analysis of Green Township

Green Township has developed over time into a quiet, suburban bedroom community. A “bedroom community” is a neighborhood that has a higher population during the evening and overnight hours than during the day. This is because most residents of Green Township work in other communities, such as the City of Cincinnati, during the day, and then return home to Green Township at night.

The community was first settled in 1809, with several existing homes dating back to the early 19th century. Most homes were built during the housing boom after World War II, and have been kept in good condition. There are several pockets of new

construction, with large single-family homes valued upwards of \$500,000. Most of the area is developed with single-family homes, but there are several multi-family structures in the community, mainly in the form of condominiums. The average home in Green Township is valued at around \$161,200 (U.S. Census Bureau, 2010).

Green Township is known for the wide variety of attractive amenities for its residents. The community offers both private and public schools, all of which boast high rates of academic excellence and offer diverse extra-curricular activities such as athletics and performing arts. Residents have access to several high-quality parks, maintained by the Hamilton County Park District. These parks offer activities such as fishing, hiking, and nature education programs for children and adults. There is a high concentration of churches, mainly Catholic, which host annual summer festivals and other events. The community also has several branches of the Hamilton County Library, one of the highest-ranked library systems in the State of Ohio. The area is served by the Green Township Fire and Police Departments, and is governed by the Board of Trustees.

Aesthetically, Green Township is a typical suburban area. Lawns are well-maintained and landscaped, often decorated for the season or current holiday. Homes are typically set back at least 30 feet from the street, which allows for wide and deep lawns. Streets are typically two-lane, with a speed limit between 25-40 miles per hour. Most side streets offer on-street parking in addition to private driveways for each residence. Major arterial and collector streets are well-lit by traditional overhead street lights, while side streets are less illuminated. Streets are identified with traditional name signage, with additional customary signage for driving laws. Due to the small amount of

non-residential establishments, there are no uniform signage regulations for identifying businesses and restaurants. These signs are typically small and several are electronic with animated displays.

Most of the local access streets provide a sidewalk on at least one side of the road. The area, which is typical for most suburban communities, has a large number of cul-de-sac streets and “no outlet” streets. These types of streets reduce the overall connectivity of the area, but are often used in suburban residential developments because they lower the speed limit, which is attractive to families for safety concerns. Bridgetown Road and Werk Road, major arterial and collector streets, have sidewalks on both sides for at least part of their length. While sidewalks offer a number of benefits to residents, they are largely underused in the area. One reason for this is the fact that there are no real destinations; there is nowhere worth walking to, and for most people, any intended destination is outside the scope of walkability. The area surrounding our site has sidewalks, but they are narrow and close to the street, making them less enticing to pedestrians. Most of the sidewalks in the area are in relatively good condition, but are not accompanied by any type of street furniture such as benches, trash cans, or decorative lighting. There are crosswalks at major intersections, but very few on local access streets.

Social Environment

The social environment is much more intangible than the built environment. It consists of the context in which one lives, such as the local culture, interactions between people, and interactions with societal institutions. To analyze the social environment of the site, Green Township, and Hamilton County, we examined demographic, economic, and crime report data for Green Township and Hamilton

County between the years 2000 and 2012. This time frame was selected due to availability of demographic and economic data from the U.S. Census Bureau and crime report statistics from the Hamilton County Sheriff's Office and Green Township Police Department.

Demographic and Economic Analysis

To gain a better understanding of the surrounding community, we examined demographic and economic statistics for Green Township and Hamilton County. This data was obtained from the U.S. Census Bureau by utilizing the American FactFinder program (U.S. Census Bureau, 2010). Data was available from the 2000 and 2010 Census programs, which limited the scope of research. This 10-year period allowed us to examine changes in various socioeconomic characteristics of the selected population, which we were then able to study in comparison with other data, such as crime statistics and elements of the built environment. Table 4-1 lists the socioeconomic characteristics we selected to examine for the purpose of this thesis.

The 2010 Census states that Green Township has a population of 58,370 individuals, an increase of 4.86% since 2000. In comparison, Hamilton County's population in 2010 was calculated at 802,374, a decline of 5.07% since 2000. This is a considerable change for both communities, the cause of which should be considered for future study. During this 10-year period, both geographical study areas experienced considerable increases in unemployment rates. Green Township's unemployment rate increased from 1.7% in 2000 to 5.2% in 2010. Hamilton County's unemployment rate went from 3.3% to 8.5% over the same period. This increase could potentially explain the population decrease for Hamilton County, but would not explain the growth experienced in Green Township.

Further examination of the Census data shows a substantial difference in racial diversity. Green Township is considerably less racially diverse than Hamilton County; the 2010 Census listed Green Township's population reporting at 94.8% White, while Hamilton County reported at 68.8% White. The largest minority population consists of Black or African American; Green Township at 2.6% and Hamilton County at 25.7% in 2010. These differences in racial groups are significant, but can possibly be explained by a brief study of the Cincinnati area's history (see Appendix A for discussion of Cincinnati's history). Both geographical study areas have small, but increasing, populations of Asian and Hispanic people. Both areas have slightly higher percentages of female individuals compared to males. Hamilton County and Green Township are similar in median age; in 2010, Hamilton County's median age was reported at 37.1 years and Green Township at 41.9 years, both increasing by around 3 years since 2000. Both areas have high levels of educational attainment. 88.0% of the population aged 25 years or older in Hamilton County has obtained their high school diploma or equivalent or higher and Green Township boasts a rate of 92.9%. In comparison, the 2010 Census shows the national rate for the population with a high school diploma or equivalent or higher at 85.9%. 30.8% of the population in Green Township has earned a Bachelor's degree or higher (including Master's, Doctoral, or other professional degree), and 32.7% of Hamilton County residents have also earned a Bachelor's degree or higher.

From an economic perspective, Green Township has higher per capita and household income levels than Hamilton County. The 2010 Census reports Green Township's per capita income of \$29,957, increasing from \$26,391 in 2000. Hamilton

County's 2010 per capita income was reported as \$28,486, increasing from \$24,053 in 2000. Mean household income in Green Township increased from \$66,635 in 2000 to \$76,017 in 2010. Hamilton County's mean household income also increased, from \$57,007 in 2000 to \$68,145 in 2010. Despite the increases in per capita and household income levels, the percentages of people whose income in the past 12 months is below the poverty level also increased for both geographical study areas. Hamilton County's percentage of people living below the poverty level in the past 12 months increased from 11.8% in 2000 to 16.2% in 2010. Green Township's percentage increased from 3.2% to 6.5% between 2000 and 2010.

The City of Cincinnati and large portions of Hamilton County are serviced by the METRO bus transit system. Green Township has very limited access to bus service, but this can be explained by the high rate of personal vehicle ownership, as well as the low density of development in the area. The bus system is currently not economically sustainable or logical for operations in Green Township. METRO has a very limited budget and services have been reduced in some major service areas in recent years. There is little demand for increased bus service in Green Township at the time of publication. Based on informal discussions with many Green Township residents, the popular opinion is against increasing bus service in the area, for a variety of reasons. During informal discussions with community residents, most people stated they would not be in favor of increased bus service because of increased taxes to support the buses, and because they would be very unlikely to utilize the service.

Crime Analysis

Criminal activity in a community can greatly affect, and be affected by both the social and built environments of a community. Crime can cause residents to change

their lifestyles, negatively impact legitimate businesses, lead to a decay in the physical realm, and alter the interactions and relationships between community members.

(Schneider & Kitchen, 2002) In addition to actual criminal activity, there is also the issue of perceived crime, or the fear of crime. Perceived crime can have more serious consequences for a community than real crime. Once an area is viewed as “unsafe,” it can be extremely challenging to improve the area’s reputation.

To address the subject of crime, both on-site and community-wide, data pertaining to crime reports and crime rates for the site, Green Township, and Hamilton County was obtained and analyzed. This data was a major component of the basis and justification to utilize CPTED in our proposed plans and recommendations. Crime data was provided by the Green Township Police Department (GTPD) and the Hamilton County Sheriff’s Office (HCSO). The provided data included generalized statistics for Green Township and Hamilton County from 2000 to 2011. GTPD provided additional data pertaining directly to the site in the form of a crime report database. This database lists all reported criminal offenses from January 2010 through June 2012, and is shown in Table 4-2. These reports allowed the author to compare the crime data against the demographic and economic data to determine any possible correlations or connections. Figure 4-5 shows a map of the site with the location and type of crime committed based on the data provided by the GTPD, and Figure 4-6 shows a map of the site with crimes by location and date.

Both the site and surrounding community have issues with criminal activity and perceived crime. Through the research and analysis process, it was determined that the site was not the cause of criminal activity in the community, but rather a representation

of a community-wide issue. In this case, crime is partially location-specific, but also a systemic issue. Crime has increased by 10.51% in Green Township since 2005 (Green Township Police Department, 2012), which is a significant change and cause for concern. On-site crime increased by 49% between 2010 and 2011, from 26 reports to 51 reports, respectively (Green Township Police Department, 2012). The majority of crimes reported on-site were theft-related, which can be explained due to the commercial use of the site. The cause for the increasing crime rate of the community is much more vague and difficult to prove. It is possible that crime rates have increased due to changes in the economic climate. Between 2000 and 2010, the poverty and unemployment rates for both Hamilton County and Green Township increased considerably (U.S. Census Bureau, 2010). A recent report by the United Nations Office on Drugs and Crime shows that during periods of economic stress, incidence of robbery may double, and other crimes such as homicide and motor vehicle theft also increase (United Nations Office on Drugs and Crime, 2012). The emotional stress caused by losing one's job can lead to destructive behaviors, such as drug or alcohol abuse, which in turn can lead to criminal activity, such as domestic violence, theft, and burglary.

Another possible cause for the increase in crime in Green Township is the demographic changes within and outside of Green Township. While the data from the U.S. Census Bureau shows that income, educational attainment, and rates of homeownership have increased since 2000, the rates of unemployment and people living below the poverty line have also increased. This is also true for the whole of Hamilton County. In regards to our site, the residential and commercial areas to the north and west have been in a state of decline for a number of years. Property values

have fallen since the 2007 recession and the area has struggled to recover.

Additionally, there has been an increase of Section 8 housing units in Green Township and the surrounding area. While there is no definite proof that the presence of Section 8 housing can increase crime or lower surrounding property values, there is some evidence showing a positive correlation between the factors (Berg, 2012) (Popkin, Rich, Hendey, Hayes, & Parilla, 2012). The relationships between Section 8 and other public housing programs and criminal activity are extremely complex and should not be considered as definitive proof of a cause and effect. This topic requires a great deal of research, but it may be a possible factor in the increase in crime rates for Green Township and Hamilton County.

There are several additional factors which may influence a person to commit a crime. These factors relate to both the built and social environments of the area, and are also dependent on individual psychological conditions. First, there must be an “opportunity” to commit a crime. This is particularly evident in theft-related crimes, and due to the commercial activity located in our site the rate of theft is quite high, making opportunity an important factor to consider. In relation to theft, the “opportunity” exists when the offender feels that he or she will be able to commit the crime and escape without being seen or captured. The absence of security cameras or other forms of surveillance, the presence and proximity of escape routes, and the availability of places to hide are some factors that influence the opportunity for crime. In retail establishments, easily concealable products and lax security measures also provide a greater opportunity for crime. In Western Hills Plaza, a commercial development located just northwest of our site, there has been a major issue with theft and shoplifting, which

has greatly increased in recent years. One of the primary reasons for this increase may be due to the opportunity of quick escape from the shopping center. Several years ago, the shopping center was renovated and a bus stop serving several lines was placed near the entrances to several stores. The issue arose when offenders, usually juveniles, realized they could time their criminal actions to match up with the arrival of their buses and make a quick escape with less risk of being apprehended. Police patrols and additional in-store security measures have been increased, but the problem persists. To reduce the opportunity for crime, a number of CPTED principles can be implemented, such as increasing natural surveillance, eliminating blind corners, and designing entrances and exits to limit escape routes. (Schneider & Kitchen, 2002, 2007) (Jeffrey, 1977) (Clarke, 1997, 2002)

Secondly, the offender must perceive that there is a substantial reward based on risk. In situations where there is a higher perceived reward based on risks, a person is more likely to commit a crime. The “risk” factor involves the likelihood of being detected and apprehended, as well as the type of punishment upon conviction. In instances of theft, such as shoplifting, the criminal has determined that the potential reward outweighs the risk of being apprehended and the possible punishments upon conviction. This factor can be combated by reducing the potential rewards, or by increasing the risks. Increasing the risk of apprehension is typically easier to implement, and can be addressed through implementing CPTED and defensible space principles. (Schneider & Kitchen, 2002, 2007) (Newman, 1996)

In addition to the factors of opportunity and risk of reward, there is also the factor of the criminal mindset to consider. In some cultures, the criminal lifestyle has been

glamorized and seen as a legitimate way of life and as a source of income. The acceptance or tolerance of crime in a community has a wide variety of negative impacts, including lower rates of educational attainment, lower property values, lower life expectancy, and a lower overall quality of life level for those who live and work in the community (Nunn, 2006). Crimes regularly go unreported because they are seen as “normal” occurrences, and because many people fear retaliation for contacting police (Nunn, 2006). Gangs and other criminals in these areas tend to establish a culture of fear, which they use to prevent victims or other people from “snitching” to the police. This problem is harder to solve, as changing the mindset of a culture or community can require a great deal of effort and time. One way that many communities have attempted to address the issue is by implementing community-oriented policing strategies. The philosophy of community-oriented policing promotes forming organizational strategies which support the use of partnerships and proactive problem-solving techniques to address public safety issues, such as crime, social disorder, and the fear of crime (Community Oriented Policing Services, 2012). Community-oriented policing policies are developed by using the SARA model to identify issues, find solutions, and evaluate the effectiveness of responses to issues. One of the primary strategies of community-oriented policing is problem-oriented policing, commonly called “POP”. Problem-oriented policing is an approach to policing in which the focus is placed on finding the root of issues and developing strategies to solve them. It is a proactive approach, focusing on why the crime occurs, rather than the traditional reactive approach of simply arresting offenders and hoping that crime will decrease as more offenders are incarcerated. Problem-oriented policing works by increasing interaction between the

community members and police, which helps build relationships and a better sense of trust. This policing strategy has shown effective in areas where crime is a systemic problem, as it helps find long-term solutions (Center for Problem-Oriented Policing, 2012).

The National Institute of Justice (NIJ) provides a wealth of information regarding crime and crime prevention. The NIJ divides crimes into categories such as crimes against specific populations, sex crimes, gang and organized crime, internet and electronic crime, and trafficking. The Federal Bureau of Investigation (FBI) also provides resources on crime, such as the Uniform Crime Reports. Uniform Crime Reports offer valuable information on statistical crime data and nationwide crime trends, which can be used by local law enforcement agencies to evaluate the conditions and trends in their areas in comparison with nationwide criminal activity (Federal Bureau of Investigation, 2012). For the purpose of our study, we focused on the categories of property crime, violent crime, and public order offenses, as they encompass the types of crime committed within our site. A property crime occurs when a victim's property is stolen or destroyed, without the use or threat of force against the victim (National Institute of Justice, 2012). Types of property crimes include theft, identity theft, arson, vandalism, burglary, breaking and entering, and some types of fraud. A violent crime occurs when the victim is harmed by or threatened by violence (National Institute of Justice, 2012). Types of violent crime include rape, sexual assault, assault, domestic violence, stalking, terrorism, child or elder abuse, robbery, and murder. A public order offense is a crime that disrupts the general order of society, such as disorderly conduct, prostitution, or public intoxication. Public order offenses are generally misdemeanors, while property

and violent crimes can be classified as either misdemeanors or felonies (National Institute of Justice, 2012).

All of these crimes can have significantly detrimental impacts on the quality of life in a community in both real and perceived ways. Real crime affects people through the loss of property or bodily harm, while perceived crime is the fear of criminal activity in an area. Perceived crime may have a greater impact on the community because once an area gains a reputation of being unsafe, it may be nearly impossible to repair the community's image. Additionally, the perception of crime is often greater than the rate of real crime. The news and media has influenced the public's perception that crime is rising across the country through dramatic reports on the evening news and the abundance of crime-related television shows such as "Law & Order" and "CSI". Dr. Mark Warr, a professor of criminology and sociology at the University of Texas, contends that the public is being "bombarded" with information about crime, leading them to believe the world is a "much more dangerous place than it really is" (Murrey, 2008). Warr also states that the fear of crime is an important social problem that must be addressed because "when people take precautions based on fear that restrict their life and their children's lives, we restrict our freedom and do so unnecessarily. Fear also undermines the civility and trust in our communities that make civic life possible, and that's a terrible consequence for a democratic society." (Murrey, 2008, p. 1)

Real crime and perceived crime are both concerns in Green Township and Hamilton County. As stated above, crime report data from the GTPD and HCSO shows that actual crime is rising in both statistical areas. Crime in Green Township has risen by 10.51% since 2005, which is a significant increase. The perception in Green

Township, based on personal experiences, informal discussions with community members, and from reports by local news media outlets, is that the neighborhood is rapidly declining and becoming unsafe. While this is a reasonable judgement due to the increased criminal activity in Green Township, the perception of danger is much higher than reality. Most crimes in the area are property crimes such as theft, and while there has been an increase in violent crimes, the rates of murder, assault, rape, and robbery remain low. We feel that CPTED can serve as a major element in crime prevention and reduction as part of a larger anti-crime initiative for the community. CPTED can be used to prevent and reduce both property and violent crime, and can be implemented in a number of low-cost, inobtrusive ways. By including CPTED into development and planning practices and through public outreach campaigns, local governments can show the communities they serve that they are actively working to improve the quality of life and truly care about the wellbeing of their citizens.

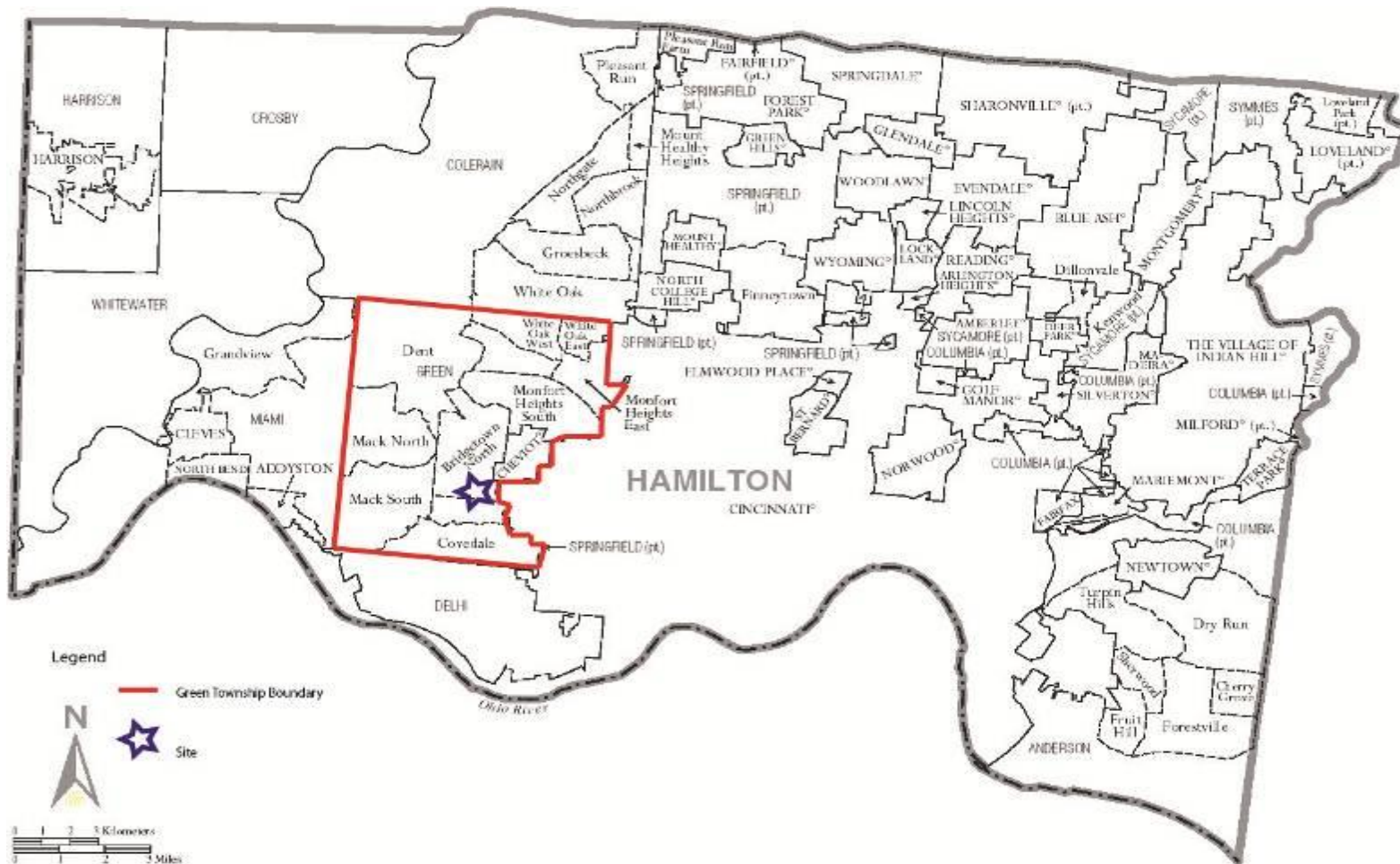


Figure 4-1. Map of Hamilton County, Green Township (outlined in red) and site (blue star)

(Adapted from

http://upload.wikimedia.org/wikipedia/commons/2/2d/Map_of_Hamilton_County_Ohio_With_Municipal_and_Township_Labels.PNG)



Figure 4-2. Google Earth Snapshot of Site (site boundary outlined in red) (Adapted from Google Earth)



Figure 4-3. Site Land Use Map with Tenant List and Location (Adapted from Google Earth)

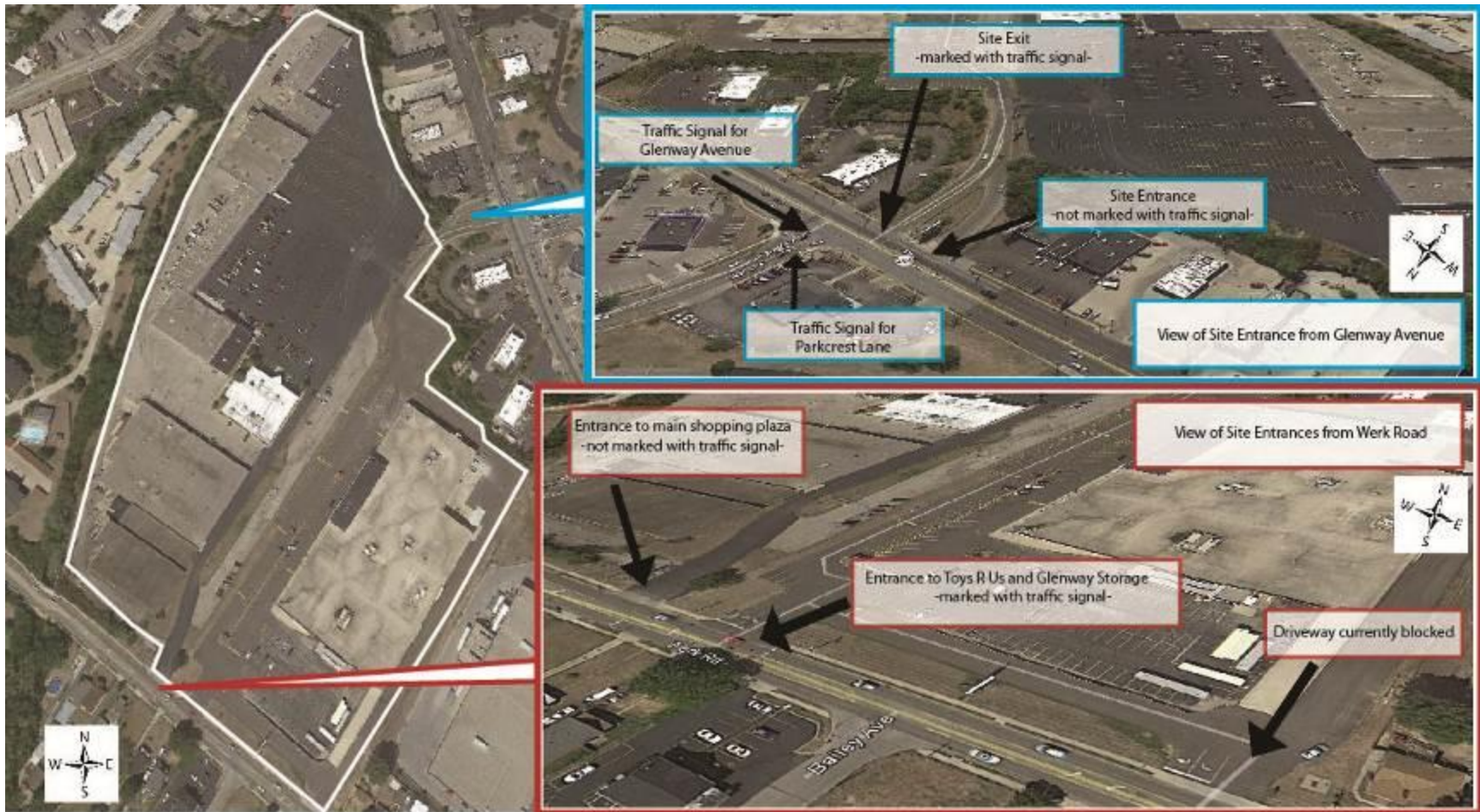


Figure 4-4. Diagram of site entrances and exits (Adapted from Google Earth)

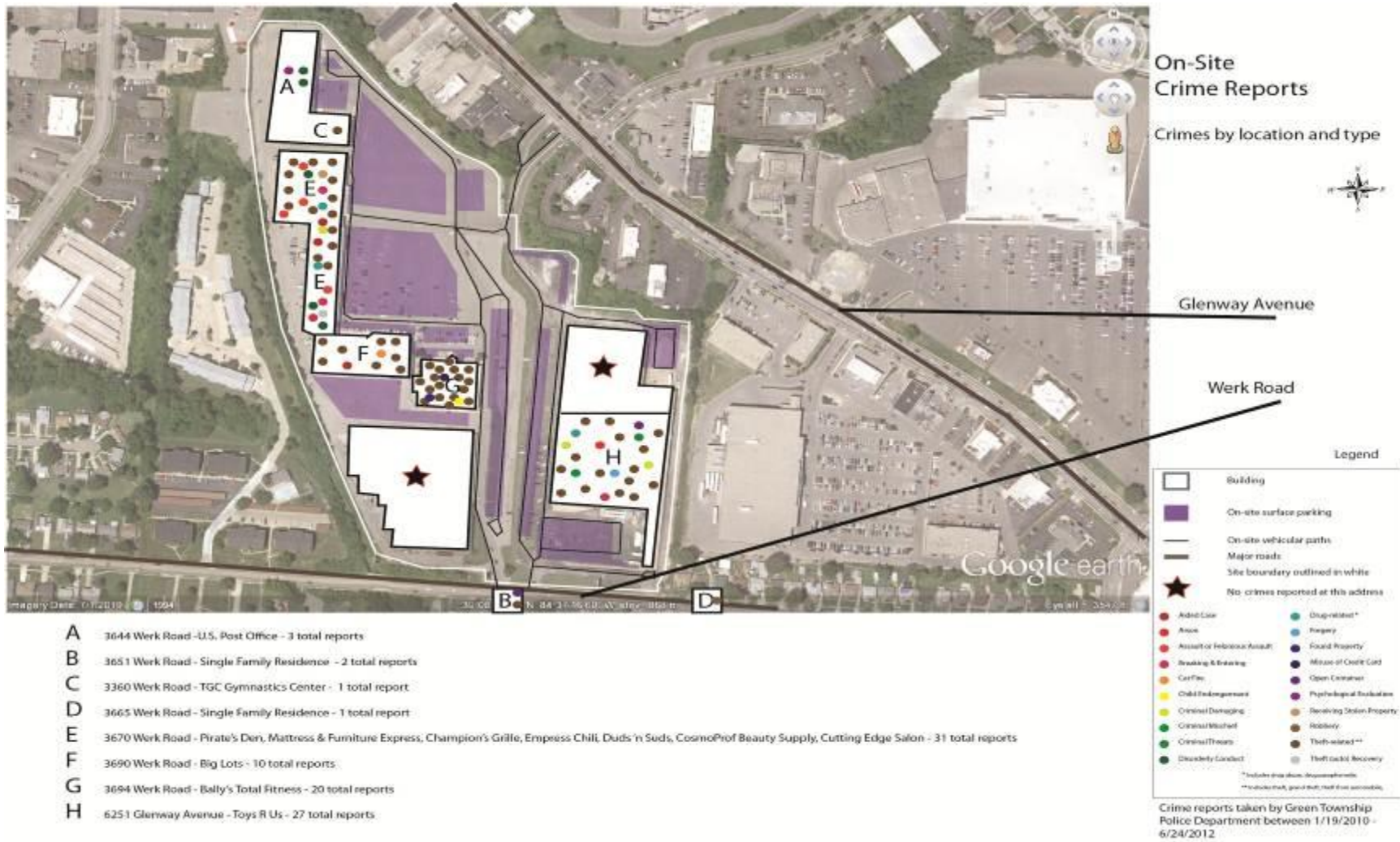


Figure 4-5. Map of On-Site Crime Reports – Crimes by Location and Type (Adapted from Google Earth)

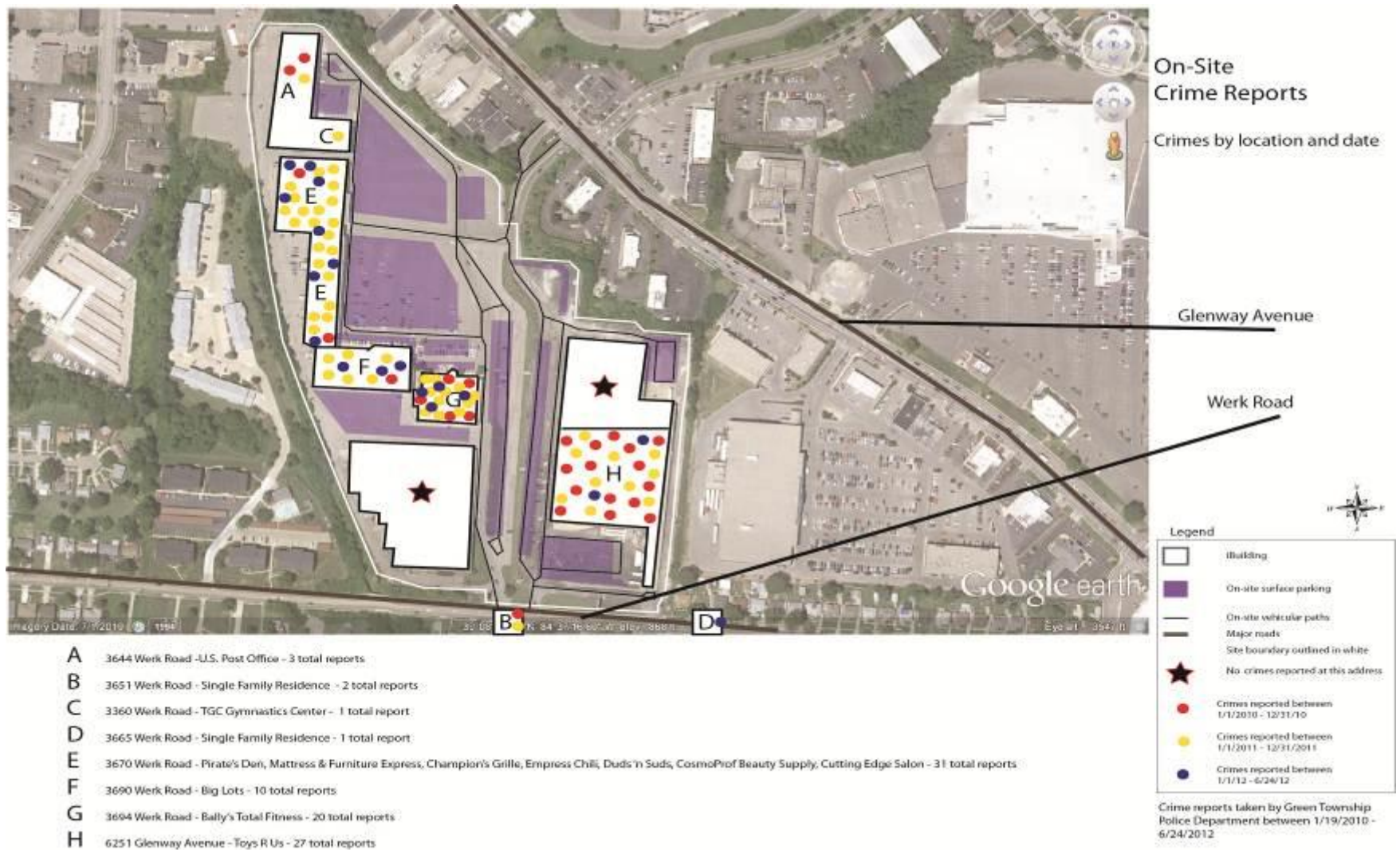


Figure 4-6. Map of On-Site Crime Reports – Crimes by Location and Date (Adapted from Google Earth)



Figure 4-7. View of Werk Road Entrance and Site Signage (taken from site facing the road)

(Photo courtesy of Rebecca Nocheck)



Figure 4-8. View of Toys R Us and Glenway Storage Superstructure (Photo courtesy of Rebecca Nocheck)



Figure 4-9. Partial View of Main Shopping Plaza Superstructure (Photo courtesy of Rebecca Nocheck)



Figure 4-10. Partial View of Main Shopping Plaza Superstructure (Photo courtesy of Rebecca Nocheck)



Figure 4-11. Partial View of Main Shopping Plaza Superstructure (Photo courtesy of Rebecca Nocheck)



Figure 4-12. Partial View of Main Shopping Plaza Superstructure (composite image)

(Photo courtesy of Rebecca Nocheck)



Figure 4-13. View of Main Parking Lot from Northwest Corner of Site (Photo courtesy of Rebecca Nocheck)



Figure 4-14. View of Site from Toys R Us Parking Lot (Photo courtesy of Rebecca Nocheck)

Table 4-1. Demographic Data for Green Township and Hamilton County, from 2000 and 2010 U.S. Censuses (U.S. Census Bureau, 2010)

	2000	2010		2000	2010
Hamilton County			Green Township		
Total Population	845,303	802,374	Total Population	55,660	58,370
Median Age (in years)	35.5	37.1	Median Age (in years)	39.1	41.9
Gender			Gender		
Male	47.7%	48.0%	Male	48.5%	48.1%
Female	52.3%	52.0%	Female	51.5%	51.9%
Race			Race		
White	72.9%	68.8%	White	97.5%	94.8%
Black or African American	23.4%	25.7%	Black or African American	1.0%	2.6%
American Indian or Native Alaskan	0.2%	0.2%	American Indian or Native Alaskan	0.1%	0.1%
Asian	1.6%	2.0%	Asian	0.6%	1.0%
Hispanic	1.1%	2.6%	Hispanic	0.5%	0.9%
Income			Income		
Per capita income	\$24,053	\$28,486	Per capita income	\$26,391	\$29,957
Median household income	\$40,964	\$47,541	Median household income	\$55,423	\$61,710
Mean Household income	\$57,007	\$68,145	Mean Household income	\$66,635	\$76,017
Percentage of people whose income in the past 12 months is below the poverty level	11.8%	16.2%	Percentage of people whose income in the past 12 months is below the poverty level	3.2%	6.5%
Housing			Housing		
Average household size (people)	2.38	2.34	Average household size (people)	2.61	2.50
Average family size (people)	3.07	3.05	Average family size (people)	3.10	3.03
Total housing units: 377,364	373,393	377,364	Total housing units: 24,666	22,007	24,666
Occupied units	346,790	333,345	Occupied units	21,318	23,291
Owner-occupied units	59.8%	59.5%	Owner-occupied units	86.5%	85.1%
Renter-occupied units	40.1%	40.5%	Renter-occupied units	13.5%	14.9%
Median value of owner-occupied units	\$111,400	\$149,400	Median value of owner-occupied units	\$127,200	\$161,200
Median gross rent	\$485	\$662	Median gross rent	\$570	\$740

Table 4-1. Continued

	2000	2010		2000	2010
Hamilton County			Green Township		
Employment			Employment		
Unemployment rate	3.3%	8.5%	Unemployment rate	1.7%	5.2%
Educational Attainment (population 25 years and older)			Educational Attainment (population 25 years and older)		
Less than 9 th grade	4.4%	3.1%	Less than 9 th grade	2.3%	2.2%
High school diploma (or equivalent)	27.8%	27.5%	High school diploma (or equivalent)	32.7%	30.4%
Bachelor's degree	18.5%	20.3%	Bachelor's degree	19.8%	21.5%
Master's or professional degree	10.7%	12.5%	Master's or professional degree	8.6%	9.2%
Percentage with a high school diploma or higher	82.7%	88.0%	Percentage with a high school diploma or higher	90.2%	92.9%
Percentage with a Bachelor's degree or higher	29.2%	32.7%	Percentage with a Bachelor's degree or higher	28.4%	30.8%
Transportation			Transportation		
Mean travel time to work (minutes)	23.0	22.6	Mean travel time to work (minutes)	24.1	23.8
Vehicles available (based on occupied housing units)			Vehicles available (based on occupied housing units)		
0 vehicles	4.4%	12.5%	0 vehicles	2.2%	3.3%
1 vehicle	28.4%	36.6%	1 vehicle	26.4%	30.1%
2 vehicles	45.4%	33.9%	2 vehicles	44.8%	40.8%
3 or more vehicles	21.8%	17.0%	3 or more vehicles	26.6%	25.8%

Table 4-2. Crime Reports for Site from January 1, 2010 – June 24, 2012 (Green Township Police Department, 2012)

Date of Report	Offense	Street Number	Street Name	Last Name
1/19/10	OPEN CONTAINER	6251	GLENWAY	YOUNG
1/19/10	DRUG ABUSE	6251	GLENWAY	SOCIETY
4/7/10	THEFT	6251	GLENWAY	BUSINESS
4/15/10	THEFT	6251	GLENWAY	BUSINESS
4/26/10	THEFT	6251	GLENWAY	BUSINESS
5/8/10	ARSON	6251	GLENWAY	BUSINESS
5/8/10	BREAKING & ENTERING	6251	GLENWAY	BUSINESS
6/21/10	THEFT	6251	GLENWAY	BUSINESS
7/22/10	THEFT	6251	GLENWAY	BUSINESS
7/22/10	CRIMINAL THREATS	6251	GLENWAY	BUSINESS
8/11/10	THEFT	3670	WERK	HOLMES
9/2/10	DISORDERLY CONDUCT	3644	WERK	STANLEY
9/2/10	DISORDERLY CONDUCT	3644	WERK	BAUER
9/9/10	THEFT	6251	GLENWAY	BUSINESS
9/13/10	THEFT FROM AUTOMOBILE	3694	WERK	PRESNELL
9/30/10	THEFT	3690	WERK	LANE
10/6/10	CHILD ENDANGERMENT	3694	WERK	HATTER
10/15/10	OPEN CONTAINER	3651	WERK	BIGGS
10/19/10	BREAKING & ENTERING	3670	WERK	BUSINESS
11/4/10	THEFT	3694	WERK	HENZ
11/5/10	THEFT	6251	GLENWAY	BUSINESS
11/8/10	CRIMINAL MISCHIEF	6251	GLENWAY	BUSINESS
11/23/10	THEFT FROM AUTOMOBILE	3694	WERK	HARRIS
12/3/10	MISUSE OF CREDIT CARD	3694	WERK	DILTS
12/12/10	THEFT FROM AUTOMOBILE	6251	GLENWAY	NEEDOM
12/22/10	THEFT	6251	GLENWAY	BUSINESS
1/5/11	THEFT FROM AUTOMOBILE	3694	WERK	MACH

Table 4-2. Continued

Date of Report	Offense	Street Number	Street Name	Last Name
1/5/11	THEFT FROM AUTOMOBILE	3694	WERK	BUSINESS
1/8/11	THEFT FROM AUTOMOBILE	3694	WERK	EBERHART
1/10/11	THEFT	6251	GLENWAY	BUSINESS
1/15/11	AIDED CASE	3670	WERK	KUETHE
1/23/11	THEFT	3690	WERK	BUSINESS
2/4/11	ASSAULT	3670	WERK	RUBERG
3/11/11	THEFT	3694	WERK	HOWELL
3/12/11	DISORDERLY CONDUCT	3670	WERK	GOETTKE
3/20/11	THEFT	6251	GLENWAY	BUSINESS
3/25/11	ASSAULT	6251	GLENWAY	BLANKUMSSE
4/6/11	THEFT	3690	WERK	BUSINESS
4/26/11	DISORDERLY CONDUCT	6251	GLENWAY	DEPAOLI
4/26/11	ASSAULT	6251	GLENWAY	MEYER
5/4/11	FORGERY	6251	GLENWAY	BUSINESS
5/5/11	CAR FIRE	3690	WERK	PLEASANTS
5/12/11	GRAND THEFT	3670	WERK	FRIES
5/12/11	GRAND THEFT	3670	WERK	BOUCHARD
6/10/11	THEFT	3670	WERK	FLEMING
6/12/11	THEFT	3670	WERK	RIEHLE
6/13/11	AIDED CASE	3670	WERK	LOWE
6/13/11	THEFT	3670	WERK	BUSINESS
6/21/11	THEFT	6251	GLENWAY	BUSINESS
7/4/11	THEFT FROM AUTOMOBILE	3690	WERK	BUSINESS
7/30/11	FELONIOUS ASSAULT	3670	WERK	ROBINSON
8/1/11	THEFT	3660	WERK	BUSINESS
8/2/11	THEFT	3670	WERK	BUSINESS

Table 4-2. Continued

Date of Report	Offense	Street Number	Street Name	Last Name
8/3/11	BREAKING & ENTERING RECEIVING STOLEN	3670	WERK	BUSINESS
8/3/11	PROPERTY	3670	WERK	MARQUEZ
8/3/11	DRUG PARAPHERNALIA	3670	WERK	BUSINESS
8/4/11	THEFT	3690	WERK	BUSINESS
8/15/11	CRIMINAL DAMAGING	6251	GLENWAY	BUSINESS
8/19/11	THEFT	3670	WERK	BROWN
8/21/11	THEFT	6251	GLENWAY	BUSINESS
9/4/11	THEFT	3670	WERK	SCHMITZ
9/5/11	THEFT	3670	WERK	STOFREGEN
9/9/11	THEFT	3651	WERK	BARSCH
9/16/11	AIDED CASE	3690	WERK	BUSINESS
9/25/11	THEFT	6251	GLENWAY	BUSINESS
9/27/11	THEFT FROM AUTOMOBILE	3694	WERK	RICHARDSON
10/3/11	THEFT FROM AUTOMOBILE	3694	WERK	SHIELDS
10/3/11	THEFT FROM AUTOMOBILE	3694	WERK	HUTH
10/13/11	THEFT FROM AUTOMOBILE	3670	WERK	PETTYJOHN
10/13/11	THEFT FROM AUTOMOBILE	3670	WERK	KRAMER KLARE-
10/13/11	THEFT FROM AUTOMOBILE	3670	WERK	ROBINSON
10/19/11	THEFT	3694	WERK	BRUNNER
10/19/11	THEFT	3694	WERK	LYKINS
11/10/11	THEFT	3670	WERK	BUSINESS
11/14/11	THEFT FROM AUTOMOBILE	3694	WERK	NELTNER
11/25/11	THEFT FROM AUTOMOBILE PSYCHOLOGICAL	3694	WERK	HERMAN
11/30/11	EVALUATION	3644	WERK	MILLER
1/9/12	THEFT (AUTO) RECOVERY	3670	WERK	STONE
1/22/12	DISORDERLY CONDUCT	3670	WERK	BIGGS

Table 4-2. Continued

Date of Report	Offense	Street Number	Street Name	Last Name
1/30/12	THEFT	3690	WERK	BUSINESS
1/30/12	THEFT	3690	WERK	BUSINESS
2/13/12	THEFT	6251	GLENWAY	ROSENACKER
2/15/12	THEFT	3694	WERK	STEFFER
3/17/12	CRIMINAL DAMAGING	6251	GLENWAY	BUSINESS
3/21/12	THEFT	3690	WERK	BLEH
3/25/12	FOUND PROPERTY	3694	WERK	SMITH
4/4/12	THEFT DISORDERLY CONDUCT	3694	WERK	DUENHOFT
4/8/12	INTOX	3670	WERK	WESTRICH
4/8/12	ASSAULT	3670	WERK	BALDRICK
4/8/12	ASSAULT	3670	WERK	FLANAGAN
4/25/12	BREAKING & ENTERING	3670	WERK	BUSINESS
5/13/12	DRUG ABUSE INST	3670	WERK	BUSINESS
6/15/12	THEFT	3694	WERK	TRENNEPOHL
6/24/12	CRIMINAL DAMAGING	3670	WERK	HENGHOLD

CHAPTER 5 RECOMMENDATIONS

Based on our research of existing literature, successful case studies, best practice applications of CPTED principles, and community and site analyses, we are proposing several recommendations. Our first recommendation is for a full-scale redevelopment of the site, which consists of a comprehensive design and management strategy based on CPTED principles. The implementation of select design features and a management strategy is also provided as an alternate recommendation for a smaller-scale retrofit of the current site. We also are recommending the study and development of policy changes for Green Township and Hamilton County. Many of our proposed recommendations are suggestions for future research, as a number of issues within the site stem from issues found throughout the community. Our recommendations are largely speculative in nature, but grounded in existing research. We acknowledge the limitations of a conceptual redevelopment plan, but we present them in good faith.

Recommendations for Site Redevelopment

Our primary recommendation consists of a complete redevelopment of the site. This entails demolishing the existing buildings and parking areas and starting over from scratch. The site, as it currently exists, is neither safe nor sustainable in its design and management. We feel the redeveloped site should be designed in a traditional neighborhood development (TND) or New Urbanist style. These styles are based on traditional mixed-use development found primarily in urban areas, where multiple uses can cohabitate in a single structure. Another design approach would be to follow form-based codes (FBC), which focuses on the actual design of the structure, rather than the uses within its walls.

Our recommendation for a full-scale redevelopment of the site is based on a holistic, comprehensive approach. By approaching the planning process with a comprehensive framework in mind, more in-depth analyses and innovative solutions can be explored and implemented. One of the most critical elements of our planning process and resulting proposals is the integration of CPTED principles in the design plan and management strategy. By focusing on intentionally implementing CPTED principles in both the design and management of the redevelopment, there is a greater likelihood of said principles having a positive impact on the site, and possibly the surrounding community.

The redevelopment of the selected site would provide an ideal situation for a public-private partnership. As shown by the case studies discussed in Chapter 2, public-private partnerships can be beneficial to all involved parties, and to the general public. We feel that the development itself should be designed, constructed, and operated by a private firm, but with the assistance of local governments and other public or non-profit agencies. Having the support of the local government would benefit the developers by providing resources, both financial and otherwise, that may not be readily available to private entities. Government-sponsored projects often include additional levels of red tape and public scrutiny, which is another reason we feel a private developer is preferential in this situation.

Full-Scale Redevelopment

Our primary recommendation is for a full-scale redevelopment of the site. As currently developed, the site is functional and useable, but unattractive and unsustainable. Planners seek to find the highest and best use of land, and the current development is neither of these. Starting over with a blank slate would allow the

development team to maximize the assets of the site and construct a landmark development for the area. The development could serve as a new standard of development practices for the community, which it desperately needs.

We recommend the site be developed in the traditional neighborhood style, which means constructing buildings to fit within the scale of the surrounding community, as well as incorporating a mix of uses, such as residential, retail, and recreational, within the site. Promoting walkability is another major element of traditional neighborhood development, which means the site should be designed to allow for maximum pedestrian accessibility rather than automobile traffic. Traditional neighborhood development works well with CPTED theory as it promotes natural surveillance and territorial reinforcement.

New Urbanism is another urban design theory that could be utilized for the development of our site. New Urbanism is similar to traditional neighborhood development in that it promotes walkability, mixed uses, and sustainability. Like traditional neighborhood development, New Urbanism and CPTED theory complement each other in some aspects. New Urbanism promotes natural surveillance, territoriality, and defensible space. Additionally, New Urbanism promotes the concepts of “safe streets” and “complete streets,” which involve slower speed limits, wider sidewalks, and other pedestrian-friendly elements that are not necessarily present in the design of roadways. New Urbanism works to counteract sprawl, which is a significant issue in the surrounding community.

Developing a form-based code is an option for the local governments to consider. Form-based codes are used to regulate development in order to achieve a specific

urban form, rather than traditional zoning policies that focus on the uses of land; form-based codes also involve land use regulations, but to a lesser degree. The City of Cincinnati recently adopted a form-based code strategy into their newly adopted Comprehensive Plan, “Plan Cincinnati,” primarily to address issues with sprawl and the deterioration of historic neighborhoods (Cincinnati City Planning Commission, 2012). By adopting a form-based code, the local governments of Green Township and Hamilton County would have greater control over the urban form of their communities, allowing them to shift development styles towards a more sustainable, pedestrian-friendly environment.

Due to the site being located in a transitional zone, we are recommending the scale of the buildings be increased. An increased maximum height from 2 stories to 4 stories would not overwhelm the surrounding community; increasing the building height would allow for slightly higher density without drastically changing the character of the neighborhood. Nearby homes and apartments range from 1 to 3 stories in height, and the site is slightly below grade, which would allow the 4 story structures to be built without overwhelming the surrounding neighborhood. We recommend the buildings feature retail uses on the first floor, with commercial and residential uses permitted from the second through fourth floors. Incorporating a mix of uses promotes increased activity on the site throughout the day and night, and can help foster a sense of community by making the development a destination for people to live, work, and play.

Architecturally, the surrounding community is fairly homogenous. Most of the homes were constructed in the traditional post-World War II suburban style, with large front porches and sloped roofs. The nearby commercial developments are standard big-

box structures, with large parking lots and bland facades. This development has the potential to set a higher standard for aesthetics in the community. We recommend the development follow a mix of Art Deco and Italianate architectural styles. Downtown Cincinnati has the largest concentration of Italianate architecture in the United States, as well as several landmark Art Deco buildings. By incorporating these architectural styles into our development, it creates a connection between the urban core and the surrounding suburbs that does not currently exist. Examples of Art Deco and Italianate architecture are found in Figure 5-16 and 5-17, respectively.

The specific design and management elements of the site are discussed in the following sections of “Design Guidelines” and “Management Guidelines”. These are specifically geared towards the full-scale redevelopment recommendation, but may also be applicable to our alternate recommendation of a smaller-scale retrofitting of the site.

Alternate Recommendation – Retrofitting of Existing Site

Because the site is currently functional, there is the option for a smaller-scale retrofit of the existing buildings and other design elements. This alternate option allows for lower-cost improvements and enhancements without demolishing the buildings or parking areas. In this situation, a retrofit would include implementing CPTED features into the existing construction, such as new lighting features, signage, or landscaping.

While we strongly recommend our plan for a full-scale redevelopment, we understand that it may not be feasible for a number of reasons. Financial constraints are likely to be an issue, as well as complications with the current property owners. There are multiple property owners on the current site, and in order to proceed with a full-scale redevelopment, it is likely that the property must be purchased by a single entity.

The retrofit option would allow the current property owners to improve the site without significant financial hardships and could be implemented over time to lessen interruptions in daily business for the current tenants. Reconfiguring the parking lot to include landscaping and pedestrian paths would be a major improvement and could be done in a short amount of time. Installing new signage with a common theme would improve the aesthetics and wayfinding within the site. New lighting fixtures could improve the safety of the site for pedestrians and drivers.

The existing site could support additional buildings if needed or wanted. These buildings could be constructed in the center of the site, which is currently a large asphalt parking lot. These buildings could be multi-story and incorporate mixed uses. Depending on the structural soundness of the existing buildings, additional floors could be built on top to provide additional space and provide opportunities for mixed uses.

In addition to the new and improved design elements, we recommend the property owners develop a management strategy to improve the functionality and operations of the site. The management strategy would be the same or similar to the strategy for the full-scale redevelopment, which is modeled after the “Towncentric” management group presented in the Gravesend Town Centre case study. Another option would be to create an anti-crime initiative, similar to the G-SAFE initiative also presented in the Gravesend Town Centre case study. The management strategy for our site is further discussed in the “Management Guidelines” section. The following sections present design and management guidelines, primarily relating to the full-scale redevelopment plan. Many of these guidelines can be adapted to fit the retrofit option, but we have elected to focus recommendations for the full-scale redevelopment.

Design Guidelines

The recommended design guidelines are primarily aligned with three of the five core CPTED principles: surveillance, boundary definition (also known as territoriality or territorial reinforcement), and access control. Each application of the principles follows one or more of the traditional approaches of natural, mechanical, or organizational implementation. This method of aligning our recommended design guidelines with the core CPTED principles is based on the comprehensive, holistic approach of our redevelopment plan. Adopting this type of strategy was also based on the CPTED checklists found in other communities. The checklists help ensure that each element of the plan, in both the design and management strategies, were taken into consideration throughout the process. The CPTED-feature implementation checklist is further discussed in the management strategy section of this paper. We will first discuss the three CPTED principles of surveillance, boundary definition, and access control, and follow with specific recommendations for the full-scale redevelopment design plan.

Surveillance

Surveillance, primarily natural surveillance, is one of the most common CPTED implementations. Natural surveillance is particularly preferred for most locations because it can be implemented in a number of ways and requires minimal resources and effort. Surveillance can also be applied through mechanical and organized means when natural elements alone are not sufficient. Natural surveillance techniques increase the threat of apprehension by implementing features which increase the perception that people can be seen at all times and in all locations. By purposely designing physical features and locating activities and people in such a way that visibility is maximized, positive social interaction may be fostered and legitimate uses of both private and public

spaces are encouraged. Additionally, potential offenders are subject to increased scrutiny and limitations on their possible escape routes. (Schneider & Kitchen, 2002, 2007) (Llewelyn Davies, 2004)

Boundary Definition

Natural boundary definition, also known as territoriality or territorial reinforcement, is the process of attempting to exert control over the social environment by clearly defining and delineating space. This process marks public, semi-public, and private spaces through the use of signage, landscaping, fencing, and other design tactics such as using different types of pavement or flooring for different levels of public or private access. By defining boundaries, a sense of ownership is created. When a space is “owned,” legitimate users of the space are more likely to challenge and report criminal activity and offenders. Additionally, “strangers” or “intruders” are more likely to stand out and be watched with greater scrutiny by the “owners” of the space, creating an additional layer of passive and active surveillance. Well-defined boundaries and identifiable levels of public or private accessibility create a sense of safety for “owners” and other legitimate users of the space, and make potential offenders aware of the substantial risks of scrutiny or apprehension. (Schneider & Kitchen, 2002, 2007) (Llewelyn Davies, 2004)

Access Control

The principle of natural access control limits the opportunity for criminal activity and anti-social behavior by taking steps to clearly differentiate between public and private spaces. This involves selectively placing entrances and exits, fencing, lighting, and landscaping to limit access or control the flow of people through the space. Natural

access control is used to complement mechanical and organized access control measures, such as target hardening. (Schneider & Kitchen, 2002)

Target hardening is the practice of strengthening the security of buildings in order to protect it from attack or, in the case of commercial developments, reduce the risk of theft. Examples of target hardening include ensuring that all doors and windows are securely closed and locked, preferably from the inside; and removing any trees or bushes which could be used as hiding places or be used to climb to a higher level of the property, such as second-floor balconies. Implementing target hardening features must be done with the utmost care. Some features, if not installed properly, can send the wrong messages to potential customers. A prime example of target hardening gone wrong is the installation of metal bars on windows and steel roll-down entrance coverings. While they are functional and effective measures, these features suggest an unsafe environment due to their frequent use in high-crime areas. Target hardening installations should be aesthetically pleasing in addition to functional, which has become easier with advances in technology and design. (Schneider & Kitchen, 2002, 2007) (Llewelyn Davies, 2004)

Suggested CPTED Features for Redevelopment Design Plan

Our recommendations for the redevelopment design plan are based on several references. A guide written by the City of Virginia Beach (City of Virginia Beach, 2000) discusses implementing CPTED into planning practices and policies. This guide provides specific examples of design features for various scenarios, such as commercial developments and residential communities. Additionally, the guide provides a sample “program support” and implementation plan, which will be further discussed in the management recommendations section. The guide poses a list of questions that

planners, designers, policy makers, and developers should consider during various steps of the planning and building processes. The “Safer by Design” guidebook (Llewelyn Davies, 2004), which, like the guide by Virginia Beach, discusses various land use scenarios and specific design elements, as well as implementation strategies for CPTED features. The guidelines for implementing CPTED in urban village centers, published by the San Diego Police Department, offers specific recommendations for mixed-use developments, which is pertinent to our redevelopment plan.

All design features are subject to the appropriate regulations set forth in Hamilton County’s Zoning and Building codes. Each design feature has been considered based on how it relates to one or more of the core CPTED principles of surveillance, boundary definition, access control, maintenance, and activity support. Some of the features may be part of both the design and management guidelines of the site, and some features may encompass to multiple CPTED principles. Each of the suggested design features is presented with a discussion, justification, and image(s) of sample design elements.

Entrances, Exits, and Pathways

Driveways should be clearly marked with signage and pavement lines for entrance and exit lanes. Entrances to semi-public and private areas can be gated and require passkeys or other identification to enter, or can be monitored by a guard. Stop signs and speed limit signs should be present throughout the site at proper locations and intervals. Vehicular pathways should be clearly marked and designed with features to prevent high speeds of travel, such as speed bumps.

Pedestrian paths should be clearly marked, well-lit, and protected from vehicular traffic. Pathways should incorporate materials that do not become slippery when wet or are prone to damage. Appropriate streetscape furniture, such as benches and trash

receptacles, should be well-maintained and incorporate anti-vandalism materials, such as graffiti-proof paint. Figure 5-1 provides an example of a well-lit pedestrian pathway.

Walkways along storefronts should be covered by awnings or building overhangs to shelter pedestrians from the elements. Overhangs from the second story, which includes balconies and solid floors, should be constructed in a way that prevents people from climbing onto them from the lower level (Llewelyn Davies, 2004). Figure 5-12 provides a diagram of appropriate façade and sidewalk design in compliance with CPTED principles.

Building Facades, Windows, and Doors

Buildings should be oriented to face the street and have entrances and windows that provide clear views from inside and outside of the building, allowing for natural surveillance of the street, sidewalk, and interior spaces. Building facades should be constructed using materials or special protective coatings that prevent vandalism. Windows on the first floor, particularly for retail storefronts, should be large, well-illuminated, and use reinforced glass to prevent smash-and-grab thefts. Windows on upper floors should be made of reinforced glass, and be constructed to open only from the inside of the building. Locks should be on the interior of all windows. Signage should cover no more than 15% of windows for retail establishments to allow for maximum visibility and surveillance (City of Virginia Beach, 2000). First-floor facades should be designed with narrow windowsills to deter people using them for seating.

Doorways for first-floor buildings should be flush with the façade. Doorways set back from the façade create alcoves in which criminals can hide or allow for loitering (San Diego Police Department, 2005). Doors on first-floor facades should be made entirely of reinforced glass to allow for maximum visibility and have interior and exterior

locks. Doors on upper floors should contain a viewing window or peephole to allow people inside to identify outsiders. Windows on these doors should not be located next to the locking mechanism of the door, which a burglar could break, reach inside, and unlock the door (San Diego Police Department, 2005).

When applicable, facades should feature decorative awnings to shelter people from the elements. These awnings should be uniform in design and size for the entire development. To ensure maximum natural surveillance, awnings should not block or obscure sightlines into the buildings or out into the street or parking areas. Figure 5-3 provides an example of proper awning design for first- and second-story levels.

Public Spaces and Parking Areas

Outdoor public spaces are a key element of encouraging social interaction and activity among residents and guests of the development. They may feature greenspace, tables and benches for dining and resting, or landscaping elements such as fountains. These open public spaces can be used for special events, farmer's markets, art exhibits, or play areas for children and parents. These spaces should have unobstructed sightlines from streets and pedestrian paths (San Diego Police Department, 2005). Figure 5-5 provides a rendering of a well-designed public space in a mixed-use development. Buildings surrounding the public spaces should be designed with the windows and doorways facing the public spaces to promote natural surveillance. Public spaces which contain seating areas should feature covered shelter areas, either permanent structures or temporary fixtures such as umbrellas. They should be well-shaded with trees, but the tree canopy must be tall enough to prevent sightlines from being obstructed. Figure 5-6 provides an example of a CPTED-compliant playground facility for children.

Parking areas should be clearly visible from the buildings. Surface lots should be small and interspersed throughout the development. Large parking areas, if necessary, should be equipped with security cameras for surveillance purposes. There should be clearly marked and well-lit pathways from the parking areas to the buildings. Parking garages, if present, should be monitored by an attendant or surveillance system. These garages should be gated and can incorporate user restrictions, which would be determined by the management agency. Hidden recesses and blind corners should be avoided, and access to elevators, stairwells, and pedestrian pathways should be clearly visible from inside and outside the parking structure (City of Federal Way, 2011). Figure 5-7 provides an example of a well-lit surface parking lot. Figure 5-8 provides an example of a well-lit pedestrian path and adjacent surface parking lot. Figure 5-9 provides a diagram of appropriate parking lot design techniques. Figure 5-10 provides an example of proper landscaping in a surface parking lot.

Lighting

Lighting is one of the most critical features for safety in a development. All areas of the site should be well-lit to discourage criminals from thinking they cannot be seen. Parking lots should be illuminated by high-intensity, uniform lighting fixtures. These fixtures should be tall and spaced appropriately to prevent any unlit spaces. Lighting fixtures should be located along vehicular and pedestrian pathways to increase visibility during night time hours.

Additionally, lighting fixtures should be graffiti-proof and covered with unbreakable shades. The appropriate wattage and other technical specifications will be in compliance with the regulations of Hamilton County's Zoning and Building codes. Lighting fixtures should be designed to minimize glare and light pollution (City of Virginia

Beach, 2000). To discourage people from wandering into enclosed or off-limits areas, these spaces should not be lit at night (San Diego Police Department, 2005). Motion-activated lighting systems can provide additional levels of security in areas with low levels of foot traffic.

Building facades should feature lighting fixtures on exterior walls and/or light posts on the adjacent sidewalks. Windows should be illuminated from the interior of the building during business hours and equipped with security lighting after closing.

Landscaped areas should feature ground-level lighting fixtures for aesthetic and security purposes.

Landscaping and Fencing

Tree canopies should be at least 7 feet from the ground to prevent obstructed sightlines and reduce the risk of people bumping their heads into the branches. Shrubs should be trimmed to three feet or below the level of the windowsills where applicable (City of Virginia Beach, 2000). Trees and shrubbery should be planted in ways that do not create hiding places or obstructed sightlines. Additionally, trees and shrubs should not be located in areas where they can be climbed to access the upper floors of the buildings. Thorny shrubs, such as holly or rosebushes, can be used to deter access to restricted areas. All plants should be native to the local area and promote good levels of stormwater drainage. Native plants fare better than exotic plants and typically require less maintenance. All plantings should be regularly pruned and well-maintained to foster a sense of ownership and civic pride in the area. Figure 5-4 provides an example of a properly landscaped building façade.

Fencing should be attractive and durable. Graffiti-resistant materials or protective coatings should be used to prevent vandalism. Masonry and other solid fencing

materials should not obstruct sightlines or create hiding places (City of Virginia Beach, 2000). Wrought-iron or picket fencing can be used to deter using fences as seating places. Outdoor public spaces and open-air patios should feature perimeter fencing (San Diego Police Department, 2005). Figure 5-11 provides an example of properly designed perimeter fencing. Restricted areas with features such as dumpsters or utility boxes should be enclosed by metal fencing. Dumpsters should be located behind buildings and properly enclosed and locked to prevent trespassing. These fences can feature decorative coverings, but should allow for natural surveillance. These fences should be at least 6 feet tall and be locked at night (San Diego Police Department, 2005). Figure 5-14 provides an example of a properly-enclosed dumpster.

Signage

All signage is subject to regulations set forth in the Hamilton County Zoning and Building codes. Signs and address markers should be well-lit and clearly legible from the street and sidewalks. Signage for commercial and retail establishments should indicate hours of operation. Signs at the entrances of the site should be aesthetically pleasing, legible, well-lit, uniform in design, and identify businesses located within the site. Wayfinding signage should be located intermittently throughout the site to provide directions for both pedestrian and vehicular traffic.

Signage that indicates prohibited behaviors should cite the appropriate code ordinances. These include no loitering, no trespassing, handicapped parking spaces, and alcoholic beverage regulations, among others.

Miscellaneous Elements

ATMs should be located in areas of high foot traffic. They should be flush with the building façade or in an open area where there is good natural surveillance. ATMs

should be well-lit, but in a way that prevents a “fishbowl” effect. A fishbowl effect is created when lighting creates too many shadows and illuminates potential targets. Proper lighting illuminates the area without casting shadows or blind spots which potential offenders may use to hide. Figure 5-13 provides an example of a CPTED-complaint ATM.

Closed-circuit television (CCTV) cameras should be present in surface parking lots and in enclosed parking structures. These cameras should be monitored by security guards who have open lines of communication with the local police agencies. CCTV cameras should be placed in open public spaces and areas of high pedestrian use to increase mechanical surveillance. Uniformed security guards or police officers should regularly patrol the area to increase organizational surveillance. Figure 5.15 provides an example of a properly designed CCTV camera structure.

Management Guidelines

The proposed management guidelines for our redevelopment plan were developed in concurrence with the design guidelines and are primarily aligned with the two core CPTED principles of maintenance and activity support, but some elements of the management guidelines also deal with the other three principles. Our research has shown that the management and design of a site are connected and dependent on each other, which is shown in the discussions of several of the suggested features. Our management guidelines are intended to enhance the benefits of the design elements through natural, mechanical, and organized implementation strategies. Our management strategy includes program support and implementation guidelines, as well as recommendations for new planning policies and regulations for the site, Green

Township, and Hamilton County. We are also including a list of possible tenants for the retail uses within the site.

Maintenance

The CPTED principle of maintenance deals with the expression of ownership of the property. Deterioration of the property, including seemingly benign occurrences such as trash on the ground, poorly maintained landscaping, and broken lighting fixtures indicate a lack of control and concern by the intended users or “owners” of the site. A poorly-maintained property may also indicate a greater tolerance of criminal activity and illicit behaviors. This principle is largely based on the Broken Windows theory, which is discussed in detail in Chapter 2. Property managers and owners should adopt a zero-tolerance policy for site maintenance issues, which means implementing a strict set of guidelines for site upkeep and cleanliness with real consequences for problems, such as fines or eviction for ongoing issues. (Wilson & Kelling, 1982) (Llewelyn Davies, 2004) (Schneider & Kitchen, 2002)

Activity Support

Activity support increases the use of the built environment for safe activities with the intention of increasing the risk of detection of criminal or other undesirable activities. Natural surveillance is a key part of activity support, which Jane Jacobs presented in 1961 as part of her “eyes on the street” theory. However, activity support can be difficult to successfully implement. While more “legitimate” users on the site are likely to increase natural surveillance, they also increase the risk of criminal activity. A higher concentration of people in an area may translate into more potential targets for offenders. Offenders may also favor areas with large crowds because it is easier for them to blend in and escape from the area before and after committing a crime. Theft

and pickpocketing are examples of crimes that may occur in these situations. (Jacobs, 1961) (Schneider & Kitchen, 2002) (Llewelyn Davies, 2004)

Use Mix

Our site is currently occupied by commercial and retail establishments. There is a high rate of tenant turnover and vacancy, which is undesirable and detrimental to the site and surrounding community. Some of the tenants are locally-owned, such as the Pirate's Den bar, the Empress Chili restaurant, and the TGC gymnastics facility, but the rest are franchises or branches of large chain retailers or companies. Many of the tenants have locations in other nearby commercial developments, and most have competitors within the site or within a one-mile radius from the site.

The redundancy of retail offerings and lack of specialty stores in the site and surrounding area have forced community residents to fulfill their wants and needs outside of the community. This is a serious and often overlooked issue; money spent elsewhere could be spent in the community, generating tax dollars which could then be used to fund projects to improve infrastructure and other community amenities. Based on personal experiences and informal discussions and surveys with residents of Green Township, we have compiled a list of desired retail and commercial establishments that would be appropriate for our proposed redevelopment.

These suggestions reflect the lack of diversity in the nearby retail and commercial stock. Most of the retail opportunities in the nearby area are in the form of big-box chain retailers such as Target, Wal-Mart and other "dollar" stores. One of the most popular suggestions was a bookstore that offers a coffee shop or small café, similar to the Joseph-Beth Bookstore located in the East Side neighborhood of Norwood. There are no existing bookstores in the area, which provides the opportunity

for someone to fill that need. Many people suggested a restaurant that serves breakfast or brunch-style foods throughout the day and evening. Other restaurant requests include bakeries, sushi, Asian fusion, specialty burgers, and interestingly, food trucks, specifically featuring tacos or other Mexican-style foods. People requested that these restaurants feature outdoor seating areas, which are rare in the surrounding community. Residents also requested the inclusion of a specialty grocery store, such as Trader Joe's or Whole Foods. The community has several Kroger and Meijer grocery stores, but residents must travel 10-15 miles to the nearest "specialty" grocer.

During informal surveys and discussions with community residents, many people also suggested stores that cater to various hobbies. Craft beer and specialty wines are becoming increasingly popular; the community currently lacks any sort of beer or wine shop outside of grocery stores, which rarely offer craft or specialty beverages. Other hobby-related suggestions include establishments offering sports memorabilia and sporting goods, knitting and fabric supplies, art and photography supplies, and home décor.

Unlike the East Side, the West Side of town lacks any specialty boutique retailers. Hyde Park and Kenwood, two East Side neighborhoods, have large shopping districts that offer numerous upscale clothing and accessory shops. Community residents suggested the inclusion of a bridal boutique, jewelers, women's and men's clothiers, and kid-friendly stores such as Build-a-Bear and Imaginarium.

Outdoor activities and open space were high on most people's lists. Many people requested a farmer's market, which could be open on weekends and located in an outdoor multi-purpose space. Farmer's markets have become very popular in recent

years as the result of health-conscious social movements such as farm-to-table and “eat local” programs. There are many family farms in the surrounding community, and many families have small backyard summer gardens where they grow their own vegetables. Farmer’s markets could also incorporate artisan booths for local craftsmen to sell their wares. Other requests were for a play area for children, a rock climbing wall, and general seating and sheltered areas for informal or organized social gatherings; the sheltered areas could be rented out for parties or meetings on weekends.

In addition to commercial and retail establishments, we recommend the inclusion of residential units in our redevelopment plan. These units would be located on the upper floors of the buildings, above retail and office spaces. These residential units could be in the form of condominiums or apartments, and be sold at various price points. Including both affordable and market-rate units would provide more housing opportunities for people who wish to live in the community, but might not be able to afford a single-family home at the present time. Figure 5-2 provides an example of a mixed-use development.

Policy Recommendations, Program Support and Implementation

This section addresses the policies we are proposing for Green Township and Hamilton County in regards to implementing CPTED requirements into the planning and design processes. This section also discusses the issue of program support and ways to implement the proposed policies. Program support deals with the formation of an informational program or packet that discusses CPTED and related issues which then may be distributed to various agencies and other people involved with the planning and design processes in the community. The program support and implementation

discussion is based on the example presented in the City of Virginia Beach's publication on designing safer communities (City of Virginia Beach, 2000).

Proposed Policy Recommendations

This section discusses our policy recommendations for Green Township and Hamilton County. This includes the discussion of CPTED checklists, crime-free leases, a CPTED-based "task force" for the community, public-private partnerships, and potential funding mechanisms such as grants and tax breaks. These policies are intended to be part of the community's comprehensive planning efforts, design guidelines, zoning codes, and other planning-and development-related initiatives.

CPTED checklists, further discussed in the literature review, are becoming increasingly popular tools for municipalities across the country. If utilized, it is essential that these checklists be adapted to fit within the local context of the community. CPTED checklists are typically a list of site features, such as lighting, landscaping, or maintenance schedules, each of which is further broken down into specific elements, such as styles and locations of each feature. It is possible to implement a CPTED checklist into the planning process in two ways; either requiring it as part of the planning and permitting process, or as a "recommended" step of the planning and permitting process. Municipalities which "recommend" utilizing their CPTED checklist may offer various incentives, such as tax breaks or density bonuses, to entice and encourage developers into adopting the policy. We have included the checklists for the City of Cincinnati and the City of Federal Way in Appendix C.

Some CPTED checklists contain an additional element known as a "crime-free lease". As discussed in Chapter 2, a crime-free lease is a legally-binding addition to a traditional leasing document which presents various requirements relating to criminal-

and drug-related activities. These addendums are frequently found in leases for government-assisted housing developments and areas that may be traditionally considered as “high-crime”. Crime-free leases may also be part of a larger-scale local government initiative to reduce crime. We recommend the inclusion of a “crime-free” addendum in all lease agreements for tenants and residents of the site.

We are also recommending the formation of a “task force” to address the issue of increasing crime rates in Green Township and Hamilton County. This group, headed by a core group of government staff, is intended to operate as a public-private partnership. Members of the group include employees from various government agencies, including planning, housing, economic development, police, fire, and other public safety departments; private firms and agencies involved with development and crime-reduction; non-profit community groups; and civilian representatives from the communities. The purpose of this group is to develop a comprehensive, multi-faceted plan to identify and address the issues relating to crime in the area. The group would utilize the SARA model, which is a planning process of scanning, analysis, response, and assessment phases (Center for Problem-Oriented Policing, 2012). The SARA model is recommended in this situation because it offers a flexible and adaptable framework for action as well as method of analyzing and assessing problems and solutions. The Gravesend Town Centre case study, found in Chapter 2, discusses the creation of the G-SAFE anti-crime initiative. The G-SAFE initiative focuses on the creation of better relationships between the police, residents, tenants, and visitors of the town centre. By developing an anti-crime initiative geared towards fostering positive interactions between all members of the community, the program helped reduce crime

rates and encouraged a sense of civic pride. Creating a similar anti-crime initiative would be one possible goal of our proposed task force.

This task force would work in cooperation with the management group of the site. The management group of the site would be in charge of all daily operations, including security, maintenance, and leasing the commercial and residential spaces. The “Towncentric” management group, presented in the case study of Gravesend Town Centre, is a “best practice” example of a management group. In the Gravesend Town Centre, the Towncentric management group coordinates services, including radio contact between retailers and police, operating the CCTV surveillance system, daily street cleaning, police and security patrols, and the collection of information pertaining to crime and site use (Llewelyn Davies, 2004). By centralizing the management of the site, there are fewer complications and service interruptions which may occur when multiple parties are involved in daily operations.

Economic Development Strategies

As part of our proposed policy changes, we are recommending the development of new or additional funding mechanisms and development incentives. The purpose of offering these programs as part of the CPTED initiative is to increase the implementation of CPTED principles and practices into development and planning processes where they may not otherwise be included. At this point, our economic development strategies are simply suggestions, and should be studied further by the municipalities to determine the most appropriate course of action.

One way to encourage growth and job creation is to provide tax abatements and incentives to new or existing businesses in an area. Another way that municipalities attract and retain businesses is through loan and grant programs. These financing

opportunities typically hinge on satisfying specialized requirements, such as small or locally-owned businesses, or by meeting higher levels of design or sustainability requirements. Other types of incentives offered by municipalities include density bonuses, transfer of development rights, and many other development bonuses provided by ordinances and comprehensive plan strategies. In addition to existing taxes, incentive programs, and loan and grant opportunities, we are proposing that Hamilton County develop tax incentives or abatements for businesses that implement CPTED principles into new and existing developments. These economic development strategies could operate on a sliding scale; developments receive funding or tax abatements based on their level of compliance with the policies.

Some of the existing economic development programs developed by the City of Cincinnati are presented in Appendix D. We have included these in our research because they provide solid examples of policies that have shown to be successful, and particularly because these policies have been successful in our local context. As with CPTED implementations, local context is important to consider in economic development policies. Many policies can work regardless of the locality, but they must be adapted and tweaked to fit the culture and other socioeconomic characteristics of the specific community.

Program Support and Implementation

This section discusses our recommendations for program support and implementation. Largely based on the City of Virginia Beach's "General Guidelines for Designing Safer Communities," we discuss the development of a program which addresses the basis of policy formation and how to incorporate CPTED principles into community planning and service delivery. Also discussed is the "Secured by Design

ToolKit” presented in the “Safer Places: The Planning System and Crime Prevention” publication by the Office of the Deputy Prime Minister (Llewelyn Davies, 2004), which offers an example of a possible interactive element of the program support package.

For a program or policy to be successful, it must be supplemented by supporting literature and/or legislation. Supporting literature helps by providing background information on the policy or program, as well as the overall goals and strategies for implementation. Supporting legislation legitimizes the policy or program and provides a legal basis for enforcement. The guide published by the City of Virginia Beach contains a section titled “Program Support,” which details the goals, discussion, objectives, and implementation strategies for the comprehensive crime prevention plan. The following section of the guide is the “Governor’s Comprehensive Crime Prevention Plan for Virginia,” which states the goals, action, impact, and justification for the programs and policies, as well as an amendment to the Code of Virginia relating to implementing school safety audits for public schools in the State of Virginia (City of Virginia Beach, 2000). The amendment is an example of crime prevention legislation that can serve as an example for Hamilton County and Green Township, should they choose to follow a similar planning strategy.

The “Program Support” section from the City of Virginia Beach states a straightforward goal of “incorporating crime prevention principles in community planning and service delivery” (City of Virginia Beach, 2000). This is a broad goal, allowing for a wide variety of possible objectives and strategies. The discussion of the program presents the concept of citizen-based crime prevention, such as Neighborhood Watch programs; and how it can be incorporated as part of a larger community planning

process. CPTED is presented as an additional tool for community planners to help “zone and design safer business and residential areas by having them consider crime risks in the design process (City of Virginia Beach, 2000). Also mentioned in the discussion is a CPTED CD-ROM, which was developed by city planners and provides guidance in tutorial form to further educate residents and other community members on the concept of CPTED and its possible applications. Additionally, the discussion of the program states how crime prevention can serve as a focus for agencies responsible for enforcing local codes. It is suggested that agencies form code enforcement teams, which consist of representatives from various agencies concerned with public health, safety, planning, and development. These teams are able to identify areas which are currently or may become crime risks, and then focus on eliminating factors which attract or permit criminal activity, such as improper zoning, poor maintenance, or other health and safety hazards (City of Virginia Beach, 2000).

The City of Virginia Beach presents three objectives as part of their program support (City of Virginia Beach, 2000):

1. Foster partnerships between crime prevention practitioners, community planners, architects, and public safety/health agencies
2. Provide CPTED training to individuals and agencies involved in the community planning and maintenance process
3. Encourage the development of code enforcement teams to serve as a crime prevention tool in localities

This list of objectives presents the three main ways the City of Virginia Beach has decided to address the goal of the comprehensive plan for crime prevention. The objectives provide a starting point to formulate various strategies and means to involve

different groups of people in the planning process. The following section of the guide presents five strategies to implement these objectives, which are as follows:

Implementation strategies

1. Enhance the CD-ROM tutorial in CPTED and distribute it, upon request, to interested agencies and individuals
2. Provide regional and statewide multi-disciplinary training in CPTED
3. Develop a CPTED curriculum for architecture, engineering, urban planning, and public administration students
4. Provide grant opportunities to Virginia localities interested in establishing code enforcement teams
5. Establish local code enforcement teams to help reduce the opportunity for crime

The guidelines published by the City of Virginia Beach present an opportunity to increase awareness and involvement in the community through one of the implementation strategies. The guide suggests developing a CPTED curriculum for architecture, engineering, urban planning, and public administration students in local colleges and universities (City of Virginia Beach, 2000). This is a very realistic opportunity for Hamilton County and the City of Cincinnati, which are home to several internationally-recognized post-secondary educational establishments. In particular, the University of Cincinnati's College of Design, Architecture, Art and Planning (DAAP) was ranked as the 3rd best design program in the world in 2012. With these programs already established and respected, implementing CPTED into the curriculum as part of lectures and studios would be relatively easy. The City of Virginia Beach guidebook further suggests hosting annual government-sponsored CPTED-based design competitions within the universities to encourage exploration and innovation in the field, which would focus on finding creative and feasible solutions to local problems.

Summary of Recommendations

Many of our recommendations, particularly those relating to the redevelopment plans for the site, are speculative. There is no way to measure the potential impacts the redevelopment may have on the surrounding community. However, we must consider what will happen if nothing is done to improve the site and surrounding community. Many of the issues found within the site and in the surrounding community cannot be fixed without some level of intervention, and are likely to get worse if not addressed.

Our recommendations focus on creating a holistic plan for improving the conditions of the site and surrounding community. Our recommendations were developed by taking into consideration the connections and interactions of the built and social environments, as well as the connections between site design and management.



Figure 5-1. Example of a well-lit pathway

(Source: <http://www.sourcesecurity.com/news/articles/co-3108-ga.4591.html>)



Figure 5-2. Example of Mixed-use Development in Philadelphia, PA

(Source: <http://phillyshark.blogspot.com/2011/04/parkside-avenue-mixed-use-development.html>)



Figure 5-3. Example of First- and Second-story awnings in York, PA (Source: <http://www.yorktentandawning.com/>)



Figure 5-4. Example of properly landscaped building façade in Virginia Beach, VA (Source: City of Virginia Beach, 2000)



Figure 5-5. Rendering of a mixed-use development and public space

(Source: http://www.nytimes.com/2010/04/25/realestate/25wczo.html?_r=0)



Figure 5-6. Example of Playground designed with CPTED principles in Camden Park, UK.

(Source: Llewelyn Davies, 2004)



Figure 5-7. Example of a well-lit parking lot (Source: http://www.eltam-eh.com/Parking-Lot_lighting.html)



Figure 5-8. Example of CPTED-compliant lighting for pathways and parking areas

(Source: <http://www.remont-39.ru/?type=560&idr=1206&back=60&next=81>)

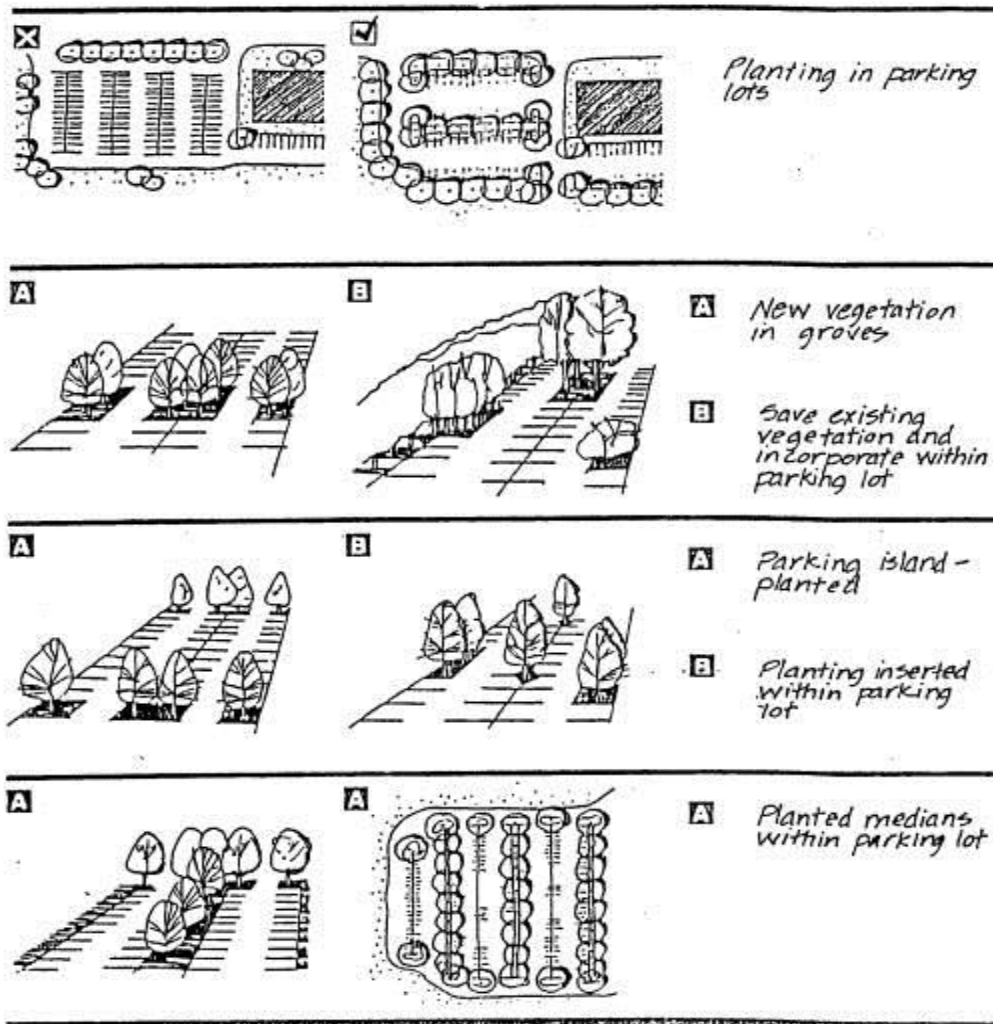


Figure 5-9. Diagram of proper parking lot design techniques by Rockbridge County, VA

(Source: <http://www.co.rockbridge.va.us/departments/planning/designandconstructionmanual.htm>)



Figure 5-10. Example of proper landscaping in a parking lot in Rockbridge County, VA

(Source: <http://www.co.rockbridge.va.us/departments/planning/designandconstructionmanual.htm>)



Figure 5-11. Example of perimeter fencing in Bishop's Mead, Chelmsford (Source: Llewelyn Davies, 2004)



Figure 5-12. Diagram of CPTED-compliant building façade and sidewalk by Metrolinx, Toronto, Ontario

(Source: <http://www.metrolinx.com/mobilityhubs/en/placemaking/placemaking6-1.aspx>)



Figure 5-13. Example of CPTED-compliant ATM (Source: <http://www.popcenter.org/tools/cpted/>)



Figure 5-14. Example of properly enclosed dumpster

(Source: http://www.fencesrichmond.com/commercial_ornamental_aluminum.php)



Figure 5-15. Example of CCTV camera structure for outdoor spaces located in Stroud, UK
(Source: Llewelyn Davies, 2004)



Figure 5-16. Example of Art Deco architecture and signage located in Albuquerque, NM

(Source: <http://www.flickr.com/photos/25229906@N00/8121421358/>)



Figure 5-17. Example of Italianate architecture located in Over-the-Rhine, a downtown Cincinnati neighborhood
(Source: <http://larabidus.wordpress.com/2012/04/05/the-most-dangerous-intersection-in-the-country-2/>)

CHAPTER 6 DISCUSSION OF RESULTS

This chapter presents an analysis of the results of our research and a discussion of our findings. Due to the speculative nature of the project, it would be inappropriate to suggest that our findings and recommendations would guarantee specific results, but we feel that our proposals are made in good faith and are well supported by existing literature, case studies, and best practice examples.

During the course of this study, it became very clear that we had underestimated the scope and scale of problems facing the site, and even more so in the surrounding community. In addition to a design and management plan for the site, we opted to research and propose policy changes for Green Township and Hamilton County. This was based on the discovery that the problems of the site are actually problems found throughout the community. These issues are complex and systemic, and require a comprehensive planning strategy to address and resolve them.

We set out to answer the following questions in regards to our proposal for a conceptual redevelopment plan for a neighborhood shopping center: what are the possible connections and interactions of the built and social environments; how CPTED and other crime-reduction and prevention principles and policies can be implemented to enhance the design and management, or form and function, of a mixed-use development; and finally, how the design and management of a site are connected. These questions are discussed and answered to the best of our ability in the following sections.

Connections and Interactions of Built and Social Environments

Our world is made up of two realms: the built environment and the social environment. The built environment, or physical environment, consists of all the natural and man-made features that provide the settings for human interaction and activity, including features such as buildings, infrastructure, and open spaces. The social environment consists of the context in which one lives. Features of the social environment are more intangible than those of the built environment, and include the local culture, intrapersonal relationships, and interactions between people and societal institutions.

While attempting to understand the complex issues facing our selected site and the surrounding community, we began to realize the intricate connections and interactions between the built and social environments. The two realms are separate entities, but influence each other constantly. The built environment sets the stage for the social environment, and the social environment determines the type of built environment and its various elements. The built environment influences human behavior through providing the context in which people interact with their physical surroundings. Some of these interactions include shopping habits, methods of travel, recreational activities, and instances of crime. The local culture has a major impact on both the social and built environments. Architecture, infrastructure, and the natural landscape are determined by the local culture of an area, which help form the built environment. The local culture determines the types of societal institutions and social interactions and activities found in the community, which are part of the social environment.

Our recommendations were based on the connections and interactions between the built and social environments. We chose to focus on these connections and

interactions because they are too important to ignore. To find a solution to the issues of the site and surrounding community, we had to find the causes. Our research showed a disconnection between the built and social environments, which can explain many of the problems. The site and surrounding community lack a sense of place, which means there are no design features that separate or identify the areas as being unique or special. The built environment does not reflect the social environment except that it is a typical suburban community. Changing the built environment could improve this issue by giving the community a sense of character, which could foster civic pride and improve the social environment. The conditions of the built environment are shown to either foster or prevent crime; in our site and surrounding area, the built environment fosters criminal activity. With the exception of police patrols, there are no indicators that the area is safe. The community may speak out against criminal activity, but the built environment suggests a tolerance for crime, especially theft and other property crimes. Implementing CPTED features into the built environment would show an active response to criminal activity; the community will not tolerate such behavior and those who commit crimes shall be punished. By focusing on the connections and interactions of the built and social environments, the community and site can be significantly improved.

How Can CPTED Principles and Policies be Implemented to Enhance the Design and Management of a Site?

The theory of Crime Prevention through Environmental Design addresses planning and design from a broad perspective. The flexibility it provides allows for planners and developers to adapt the principles and techniques outlined in the theory to the issues and context of the particular locality. CPTED considers a broad array of

problems, not just crime, and requires a systematic analysis of the conditions and factors that may be the cause of crime and other community issues. Plans and policies that implement CPTED take a more proactive approach in solving problems, and put a high emphasis on community involvement. Implementing CPTED principles into the design and management of the site may be done without additional costs, and in some cases, at a lower cost than non-CPTED features. Additionally, implementing CPTED features does not require a total commitment; the principles, which are most effective when used in conjunction with each other, can be implemented individually and still have a beneficial impact on crime reduction and prevention.

As discussed in the Recommendations chapter, we feel that a holistic, comprehensive approach works best in terms of planning and development practices and policies. In regards to CPTED, we feel the most effective implementations are approached in this way. By creating a framework or planning strategy with crime reduction as the central focus, the final plans and completed project are more likely to produce the intended results than plans where CPTED and other crime-reduction strategies are considered as an afterthought. One of the most critical factors of successful crime-reduction implementations is that they are intentionally implemented. There are countless developments and communities throughout the world in which CPTED features exist, but this is likely due to coincidence rather than on purpose. The CPTED features implemented without intention can still be effective, but the intentional implementations are typically most effective in reducing and preventing crime.

In terms of our site, we have presented two scenarios; a full-scale redevelopment plan involving complete demolition of existing structures, the construction of new

buildings, and redesigned parking and landscaping features; and a plan involving the retrofitting and renovation of existing buildings, additional new construction, and redesigned parking and landscaping features. While the full-scale redevelopment plan is preferred, both scenarios would be a vast improvement over the existing development. The flexibility of CPTED allows for crime-reduction and prevention features to be implemented in both scenarios. CPTED addresses elements of site design and management in a number of ways, often showing that these two parts of site planning are dependent on each other; design features influence the management strategies, and vice versa. Planning and development strategies developed with a CPTED framework are able to connect the design and management of a site, and feature the additional benefit of crime prevention.

How are the Design and Management of a Site Connected?

Our research has shown that the design and management of a site are connected at such a fundamental level that they cannot be considered as independent elements. The design of a site provides the physical, tangible features such as buildings and open spaces. The management of a site creates an operational framework, influencing the uses and users of the physical features; the management strategies provide the structure of the social environment. Both of these elements play a role in the functionality of the site. Management strategies are typically based on how the site is designed, because the physical form has a determining effect on how, when, and by whom the site is used. If a site is designed without considering how the physical features will impact the way the site is used, or if a management strategy is developed without considering the physical design features, issues are likely to arise, possibly resulting in the “failure” of a development or community.

Our site in particular has major issues in terms of design and management. There are few, if any, connections between the site's design and management, leading the site and its users to suffer. The site is functional, but barely. There is a high rate of tenant turnover and vacancy, and the parking lot is largely wasted space. The site does not invite people to use it; people only visit the site out of necessity, not out of curiosity or for fun. To improve the conditions of the site and surrounding community, a greater emphasis must be placed on the connections between design and management, which we have addressed in our recommendations.

CHAPTER 7 CONCLUSION

We acknowledge that our recommendations, while thoroughly researched and carefully considered, are highly speculative and incomplete. The scope of this thesis widened drastically over the course of our research and analysis. What originally began as a simple study of an existing neighborhood shopping center quickly turned into a complex examination of an entire community when it was discovered that the issues found within the selected site were representative of issues permeating throughout the whole of Green Township and Hamilton County. Our research into the physical and social environments of the site and community left us with more questions than answers. Readers of this work must understand that this study should be viewed as a starting point, a catalyst for future research and analysis, and not as a complete or definitive guide. This chapter offers a discussion of limitations to knowledge, complications, recommendations for future research and analysis, and finally, our closing remarks.

Limitations to Knowledge and Complications

While practical applications of the theory of Crime Prevention through Environmental Design have been demonstrated in a number of case studies across the globe, researchers and scholars still debate the theory's actual effectiveness in preventing and reducing crime. Due to the number and diversity of factors that influence the amount and types of crime in a specific area, it is rather difficult to prove that CPTED implementations are the actual source of crime reduction or prevention as opposed to other extraneous factors, such as a change in socioeconomic characteristics of a community or a decline in the quality of the physical environment

(Clarke, 2002). In regards to this thesis, our recommendations and proposals are purely speculative in nature. Every effort was made to present proposals that are realistic and feasible, but there is no way to be certain of their actual, potential impacts.

Data accessibility can be a major limitation for all kinds of research. We were fortunate to have access to demographic, economic, and crime data for Green Township and Hamilton County. Access to specific crime report data was limited due to the sensitive material, which presented some obstacles in obtaining a complete picture of the criminal activity in the area.

Time constraints and limiting the scope of our research was an additional issue. Due to the complex nature of community and site planning, we had to limit our research to specific factors and principles that were directly pertinent to our main research questions. Limiting our scope allowed us to explore our selected factors in further detail, while still providing a comprehensive study of the area and recommendations for improvements.

Recommendations for Future Study

We have presented a number of recommendations in regards to the redevelopment of our selected site, as well as policy changes for Green Township and Hamilton County in regards to current planning and development processes and regulations. These recommendations are speculative in nature, based on case studies, best practice examples, and relevant literature. We have examined a multitude of factors in regards to the current conditions of our site and the surrounding community, in terms of both the social and built environments. The results of our research and analysis demonstrate a need for additional and intensive study of the site and especially the surrounding communities of Green Township and Hamilton County.

Based on our recommendations, we suggest that the governmental agencies of Green Township and Hamilton County consider conducting a detailed and intensive study of their respective communities' current conditions, both social and physical, and reevaluate their comprehensive planning strategies. We feel that our research has shown that the existing policies and plans are ineffective and, without careful revisions, will allow the communities to continue to decline. These suggestions should not be seen as an attack on the local governmental agencies and development community, but rather as a gentle push towards the creation of an improved, innovative, and proactive comprehensive planning strategy. We feel that our proposals provide a starting point and framework for the future planning and development practices in the area, and consider our proposals to be in the best interests of the general public.

A financial feasibility study would need to be performed by the development agency to determine the actual costs of the full-scale redevelopment or retrofitting plan. Further site analysis and community studies are also recommended. Forming a public-private partnership "task force" to address the needs and issues in the community, as well as the formation of a management group for the site, are also recommendations that should be further examined.

Closing Remarks

The purpose of this thesis was to examine the following questions in regards to a conceptual redevelopment plan for a neighborhood shopping center in Green Township, Ohio: what are the possible connections and interactions of the built and social environments; how CPTED and other crime-reduction and prevention principles and policies can be implemented to enhance the design and management, or form and function, of a mixed-use development; and finally, how the design and management of a

site are connected. Our research indicates that approaching the planning and development process through a holistic, comprehensive manner is likely the best way to proceed with any future projects, programs, or policies. We have found that major disconnections between the built and social environments have negatively impacted our site and surrounding community, and are also evident in the design and management of our site. Developing a planning and development strategy based on CPTED principles would help establish better connections between the built and social environments, as well as in the design and management of the site.

Our research has shown the importance of understanding and developing the connections and interactions between the form and function of our communities. By developing plans and policies that implement CPTED theory, we can work towards creating more livable, safe environments, both in the physical realm and social realm. CPTED theory works to enhance the connections between the form and function of a building, site, or community, while simultaneously working to reduce and prevent crime.

APPENDIX A NOTES

“West Side” Defined

The “West Side” of Cincinnati is a term used by Cincinnati residents to identify the area of the City of Cincinnati and Hamilton County to the West of Vine Street. Vine Street is located in Downtown Cincinnati, and has traditionally been the “center” line dividing east and west. There is a noted cultural difference between the West Side and East Side. These observations are based on the author’s personal knowledge of Cincinnati and Hamilton County as a life-long resident. These observations can be proven by examining the demographic and economic statistics of the area, which would be a topic for future study. West Siders traditionally have a reputation for being “blue collar” workers, are politically conservative, mostly Catholic, and are less inclined to spend money on frivolous or expensive items. Homes on the West Side are typically smaller and built before or immediately after World War II. The West Side has a solid retail and commercial supply, but the majority of these stores cater to basic needs and “discount” goods.

East Siders typically are thought of as “white collar” workers, also politically conservative, but more diverse in religious beliefs. For the most part, homes are newer, larger and have a higher value on the East Side. East Siders are thought to spend more money on luxury items, which is reflected in the retail and commercial opportunities located on the East Side of town. The East Side has several large shopping malls, as well as a number of shopping districts that offer specialty and “boutique” goods.

Cincinnati's History – Race Relations

The City of Cincinnati and its larger metropolitan area have a complex history of race relations. Cincinnati was settled in 1788 and was a major center for commercial trade and transportation due to its location along the banks of the Ohio River. Slavery was not legal in Ohio, and many free Blacks or African Americans lived and worked in Cincinnati. Across the Ohio River in Kentucky, slavery was still legal until after the Civil War. Cincinnati played an integral role in the Underground Railroad, as it was one of the first free cities for slaves fleeing the South. While many Cincinnatians were welcoming towards the free Blacks and newly freed slaves, there were some who objected to the growing population, largely due to competition for employment. The first race riot in Cincinnati was between July and August of 1829. Additional major riots occurred in 1836 and 1841. Harriet Beecher Stowe wrote *Uncle Tom's Cabin* following her time spent in Cincinnati, working with freed slaves. This novel thrust Cincinnati into the anti-slavery spotlight in 1847. During the late 19th and throughout most of the 20th centuries, Cincinnati experienced the phenomenon of “white flight”. Middle-class whites who had traditionally resided in the urban core relocated en masse to the suburbs. These neighborhoods were repopulated by working-class African American families seeking better economic opportunities. Racial tensions seethed under the surface for many years, bubbling up in 1968 after the assassination of Dr. Martin Luther King, Jr. Most recently, Cincinnati experienced a major race riot in 2001, following the shooting of Timothy Thomas, a black man, by a white Cincinnati Police officer during a foot pursuit. Cincinnati has had a stigma of being a “racist” city, especially after the 2001 riots, but the local government, law enforcement departments, and various public and private interest groups have been working together to ease tensions and educate the

community on diversity and tolerance. The urban core, especially the Central Business District, The Banks riverfront development, and Over-the-Rhine neighborhoods, have undergone a major revitalization effort in recent years, which has lowered crime, increased property values, and brought many new businesses and residents to the area. This urban renewal project has vastly improved the social and built environments of Downtown Cincinnati, but some view it as gentrification. The relationship between racial groups in Cincinnati continues to improve but remains a delicate issue.

APPENDIX B
PROPERTY REPORTS

Property reports obtained from Hamilton County Auditor, current as of October 12, 2012 (Hamilton County Auditor, 2012)

Property Report				
Parcel ID	Address	Index Order	Card(s)	
550-0132-0012-00	3670 WERK RD	Street Address	2	
Tax Dist	School Dist	Land Use		
163 GREEN TWP-OAK HILLS LSD-00450	16 OAK HILLS LSD	425 Neighborhood shopping center		
Owner Information Call 946-4015 if Incorrect	Mail Information Call 946-4800 if Incorrect	Property Information		
CMPC LLC 1460 WALDEN AVE LAKEWOOD, NJ 08701 USA	CMPC LLC 1460 WALDEN LAKEWOOD, NJ 08701 USA	WERK RD 14.3478 AC R2-T2-S14 PARS 12-326 CONS TIF ABATEMENT		
Board of Revision	Yes(12)	Date	9/27/2010	
Rental Registration	No	Conveyance #	11993	
Homestead	No	Deed Number	219648	
2.5% / Stadium Credit	No	Mkt Land Value	1,752,120	
Divided Property	No	Cauv Value	0	
New Construction	Yes	Mkt Impr Value	3,531,600	
Foreclosure	No	Mkt Total Value	5,283,720	
Other Assessments	Yes	Total TIF Value	0	
Front Ft.	0.00	Abated Value	0	
# of Parcels	1	Exempt Value	0	
Deed Type	15 SH-Sheriffs Deed	Acreage	14.347	
Sale Amount	\$2,800,000	Taxes Paid	\$113,912.92	
Note				
1) 12/1/09 bor #08-206444 decrease to 5,900,000				
2) 9/20/11 bor #10-402507 no change				
3) 5/10/12 CCP A1108404 decrease to 2,800,000				
4) 8/22/12 BTA 2010-K-49 decrease to 5,350,000 for tax yr 2008 & decrease to 4,800,000 for tax yr 2009				
Levy Info				
Proposed Levies	Mill s	Current Annual Tax	Estimated Annual Tax	Not e
Hamilton County - Mental Health	2.99	\$4,075.67	\$4,075.67	C
Hamilton County - Senior Services	1.29	\$2,208.86	\$2,208.86	C
Levies Passed-2012 Pay 2013 Tax Bill	Mill s	Current Annual Tax	Estimated Annual Tax	Not e

No Passed Levies Found

Improvements

Improvement	Measurements	Year Built
632 Superstructure	2600 SQUARE FEET	
632 Superstructure	672 SQUARE FEET	
632 Superstructure	304 SQUARE FEET	
632 Superstructure	600 SQUARE FEET	
525 Paving Asphalt	120000 SQUARE FEET	1984

Commercial

Use Code	425 Neighborhood shopping cCenter	Year Built	1984
Net Leaseable No. of Units		Gross Area	92,028.00

Commercial History

Section	Occupancy	Finished Square Ft.	Story Height	Stories
1	413 Comm. Shopping Ctr.	92,028.00	14.00	1

Transfer

Deed Book	Page	Sale Price	Sale Date	Current Owner
		\$2,800,000	9/27/2010	CMPC LLC
		\$0	5/27/1999	CINCINNATI MARKETPLACE LLC
		\$0	12/26/1995	CONSOLIDATED PROPERTIES
		\$0	12/26/1995	SCHLACHTER THOMAS L TR
		\$0	6/1/1989	CONSOLIDATED PROPERTIES
		\$0	10/1/1984	CINCINNATI MARKETPLACE CO
		\$0	6/1/1982	CENTRAL TRUST CO. N A THE

Value History

Year	Date	Land	Improvements	Total	Assessment Reason
2011	2011/08/01	\$1,752,120	\$3,531,600	\$5,283,720	Reappraisal, Update or Annual Equalization
2010	2012/05/10	\$1,752,120	\$1,047,880	\$2,800,000	Changes by Board of Revision, Tax Appeals, Courts
2009	2012/08/22	\$2,394,170	\$2,405,830	\$4,800,000	Changes by Board of Revision, Tax Appeals, Courts
2008	2012/08/22	\$2,394,170	\$2,955,830	\$5,350,000	Changes by Board of Revision, Tax Appeals, Courts
2008	2009/12/04	\$4,000,000	\$1,900,000	\$5,900,000	Changes by Board of Revision, Tax Appeals, Courts
2008	2008/09/27	\$2,394,170	\$5,004,680	\$7,398,850	Reappraisal, Update or Annual Equalization
2008	2008/08/25	\$2,394,170	\$5,004,680	\$7,398,850	Changes to/from Exempt Property
2005	2005/09/25	\$2,394,200	\$5,004,700	\$7,398,900	Reappraisal, Update or Annual Equalization
2002	2002/10/08	\$2,643,100	\$4,722,300	\$7,365,400	Reappraisal, Update or Annual Equalization
2001	2001/10/19	\$2,429,300	\$4,340,400	\$6,769,700	Miscellaneous
2001	2001/06/05	\$1,934,800	\$2,954,100	\$4,888,900	New Construction - Full Value
1999	1999/11/06	\$1,934,800	\$2,759,500	\$4,694,300	Reappraisal, Update or Annual Equalization
1996	1996/01/01	\$1,934,800	\$2,796,200	\$4,731,000	Miscellaneous

Property Report

Parcel ID	Address	Index Order	Card(s)
550-0132-0017-00	3670 WERK RD	Street Address	1

Tax Dist	School Dist	Land Use
163 GREEN TWP-OAK HILLS LSD-00450	16 OAK HILLS LSD	340 Light Manufacturing and assembly

Owner Information Call 946-4015 if Incorrect	Mail Information Call 946-4800 if Incorrect	Property Information
WERK REALTY INC P O BOX 58400 CINCINNATI, OH 45258 USA	WERK REALTY INC P O BOX 58400 CINCINNATI, OH 45258 USA	WERK RD AC IRR R2-T2-S14 NW ABATEMENT

Board of Revision	Yes(10)	Date	12/1/1984
Rental Registration	No	Conveyance #	0
Homestead	No	Deed Number	
2.5% / Stadium Credit	No	Mkt Land Value	497,600
Divided Property	No	Cauv Value	0
New Construction	No	Mkt Impr Value	445,770
Foreclosure	No	Mkt Total Value	943,370
Other Assessments	Yes	Total TIF Value	166,670
Front Ft.	0.00	Abated Value	0
# of Parcels	0	Exempt Value	0
Deed Type	0	Acreage	3.242
Sale Amount	\$0	Taxes Paid	\$20,473.32

Levy Info

Proposed Levies	Mill s	Current Annual Tax	Estimated Annual Tax	Not e
Hamilton County - Mental Health	2.99	\$727.68	\$727.68	C
Hamilton County - Senior Services	1.29	\$394.38	\$394.38	C

Levies Passed-2012 Pay 2013 Tax Bill	Mill s	Current Annual Tax	Estimated Annual Tax	Not e
<i>No Passed Levies Found</i>				

Improvements

Improvement	Measurements	Year Built
632 Superstructure	425 SQUARE FEET	
632 Superstructure	1000 SQUARE FEET	
525 Paving Asphalt	25000 SQUARE FEET	1945

Commercial

Use Code	340 Light Manufacturing and assembly	Year Built	1945
		Gross Area	93,563.00

**Net
Leaseable
No. of Units**

Commercial History

Section	Occupancy	Finished Square Ft.	Story Height	Stories
1	494 Industrial Light Manufacturing	31,325.00	20.00	1
2	344 Office Building	6,224.00	16.00	1
2	406 Storage Warehouse	56,014.00	16.00	1

Transfer

Deed Book	Page	Sale Price	Sale Date	Current Owner
		\$0	12/1/1984	WERK REALTY INC
		\$0	11/1/1984	NAME NOT ENTERED THIS
		\$0	11/1/1984	CENTRAL TRUST CO N A
		\$0	11/1/1982	MOSHER MARITA 1/2 & MARCI

Value History

Year	Date	Land	Improvements	Total	Assessment Reason
2011	2011/09/05	\$497,600	\$445,770	\$943,370	Reappraisal, Update or Annual Equalization
2008	2008/09/27	\$642,880	\$521,920	\$1,164,800	Reappraisal, Update or Annual Equalization
2008	2008/08/27	\$618,150	\$501,850	\$1,120,000	Reappraisal, Update or Annual Equalization
2008	2008/08/26	\$618,150	\$501,850	\$1,120,000	Changes to/from Exempt Property
2005	2005/09/25	\$618,200	\$501,800	\$1,120,000	Reappraisal, Update or Annual Equalization
2002	2002/10/08	\$461,600	\$673,300	\$1,134,900	Reappraisal, Update or Annual Equalization
1999	1999/11/06	\$441,700	\$644,300	\$1,086,000	Reappraisal, Update or Annual Equalization
1996	1996/01/01	\$300,390	\$491,840	\$792,230	Miscellaneous

Property Report

Parcel ID	Address	Index Order	Card(s)
550-0132-0360-00	3694 WERK RD	Street Address	1

Tax Dist	School Dist	Land Use
163 GREEN TWP-OAK HILLS LSD-00450	16 OAK HILLS LSD	464 Recreational Facilities / Bowling alley
Owner Information Call 946-4015 if Incorrect	Mail Information Call 946-4800 if Incorrect	Property Information
BTF CINCINNATI CORPORATION 80 MAIN ST WEST ORANGE, NJ 07052 USA	BTF CINCINNATI CO (819-19 BALLY TOTAL FITNESS 8700 WEST BRYN MAWR 2NDFL CHICAGO, IL 60631 USA	NS WERK RD 2.1585 AC R2-T2-S14

Board of Revision	Yes(10)	Date	8/6/1999
Rental Registration	No	Conveyance #	12420
Homestead	No	Deed Number	881912
2.5% / Stadium Credit	No	Mkt Land Value	503,210
Divided Property	No	Cauv Value	0
New Construction	No	Mkt Impr Value	1,696,790
Foreclosure	No	Mkt Total Value	2,200,000
Other Assessments	Yes	Total TIF Value	0
Front Ft.	0.00	Abated Value	0
# of Parcels	2	Exempt Value	0
Deed Type	10 LW-Limited Warranty	Acreage	2.158
Sale Amount	\$5,507,600	Taxes Paid	\$46,737.31

Note

1) 7/13/05 BOR #04-70469 NO CHANGE

2) 8-13-08 bor #07-102267 no change

3) 10/21/10 bor 09-303758 no change

4) 11/1/11 bta 201-K-3544 decrease to 2,200,000

Levy Info				
Proposed Levies	Mill s	Current Annual Tax	Estimated Annual Tax	Note
Hamilton County - Mental Health	2.99	\$1,697.00	\$1,697.00	C
Hamilton County - Senior Services	1.29	\$919.71	\$919.71	C

Levies Passed-2012 Pay 2013 Tax Bill	Mill s	Current Annual Tax	Estimated Annual Tax	Note
No Passed Levies Found				

Improvements		
Improvement	Measurements	Year Built
632 Superstructure	336 SQUARE FEET	
632 Superstructure	375 SQUARE FEET	

525 Paving Asphalt

25000 SQUARE FEET

1989

Commercial**Use Code**464 Recreational
Facilities/Bowling alley**Year Built** 1989**Gross Area** 39,616.00**Net
Leaseable
No. of Units****Commercial History**

Section	Occupancy	Finished Square Ft.	Story Height	Stories
1	483 Fitness Center	19,808.00	14.00	1
2	483 Fitness Center	19,808.00	12.00	1

Transfer

Deed Book	Page	Sale Price	Sale Date	Current Owner
		\$5,507,600	8/6/1999	BTF CINCINNATI CORPORATION
		\$5,750,000	8/28/1997	BTF CINCINNATI ASSOCIATES LTD
		\$0	10/1/1988	PETRARCA ANTHONY A

Value History

Year	Date	Land	Improvements	Total	Assessment Reason
2011	2011/11/01	\$503,210	\$1,696,790	\$2,200,000	Reappraisal, Update or Annual Equalization
2009	2011/11/01	\$726,350	\$1,473,650	\$2,200,000	Changes by Board of Revision, Tax Appeals, Courts
2008	2008/09/27	\$726,350	\$4,781,150	\$5,507,500	Reappraisal, Update or Annual Equalization
2008	2008/08/26	\$705,200	\$4,802,300	\$5,507,500	Changes to/from Exempt Property
2008	2008/01/30	\$705,200	\$4,802,300	\$5,507,500	Changes to/from Exempt Property
2005	2005/10/11	\$705,200	\$4,802,300	\$5,507,500	Reappraisal, Update or Annual Equalization
2003	2003/05/19	\$705,200	\$4,802,300	\$5,507,500	Changes by Board of Revision, Tax Appeals, Courts
2002	2002/10/08	\$725,700	\$4,941,600	\$5,667,300	Reappraisal, Update or Annual Equalization
2001	2001/10/01	\$705,200	\$4,802,300	\$5,507,500	Changes by Board of Revision, Tax Appeals, Courts
1999	1999/06/30	\$705,200	\$5,044,800	\$5,750,000	Changes by Board of Revision, Tax Appeals, Courts
1999	1999/06/29	\$705,200	\$2,219,800	\$2,925,000	Changes by Board of Revision, Tax Appeals, Courts
1998	1997/12/31	\$705,200	\$2,219,800	\$2,925,000	Miscellaneous
1998	1997/12/31	\$0	\$0	\$0	Miscellaneous
1996	1996/01/01	\$705,200	\$2,219,800	\$2,925,000	Miscellaneous

Property Report

Parcel ID	Address	Index Order	Card(s)
550-0132-0016-00	6251 GLENWAY AVE	Street Address	1

Tax Dist	School Dist	Land Use
163 GREEN TWP-OAK HILLS LSD-00450	16 OAK HILLS LSD	425 Neighborhood shopping center

Owner Information	Mail Information	Property Information
Call 946-4015 if Incorrect IMBUS ENTERPRISES LIMITED PARTNERSHIP 874 STATE ROUTE 28 MILFORD, OH 45150 USA	Call 946-4800 if Incorrect IMBUS ENTERPRISES LIMITED PARTNERSHIP 874 STATE ROUTE 28 MILFORD, OH 45150 USA	6251 GLENWAY AVE 9.692 AC R2-T2-S14 NW PRS 16-256 CONS - TIF ABATEMENT

Board of Revision	Yes(11)	Date	1/7/2011
Rental Registration	No	Conveyance #	15697
Homestead	No	Deed Number	226207
2.5% / Stadium Credit	No	Mkt Land Value	917,810
Divided Property	No	Cauv Value	0
New Construction	Yes	Mkt Impr Value	212,190
Foreclosure	No	Mkt Total Value	1,130,000
Other Assessments	Yes	Total TIF Value	0
Front Ft.	0.00	Abated Value	0
# of Parcels	1	Exempt Value	0
Deed Type	10 LW-Limited Warranty	Acreage	9.692
Sale Amount	\$1,130,000	Taxes Paid	\$25,422.32

Note

- 1) 7/1/05 BOR #04-70479 DECREASE TO 3,640,000
- 2) 12/17/09 bor #08-205676 no change
- 3) bor #10-400418 decrease to 1,130,000

Levy Info

Proposed Levies	Mill s	Current Annual Tax	Estimated Annual Tax	Not e
Hamilton County - Mental Health	2.99	\$871.64	\$871.64	C
Hamilton County - Senior Services	1.29	\$472.40	\$472.40	C

Levies Passed-2012 Pay 2013 Tax Bill	Mill s	Current Annual Tax	Estimated Annual Tax	Not e
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No Passed Levies Found

Improvements

Improvement	Measurements	Year Built
632 Superstructure	8300 SQUARE FEET	
632 Superstructure	1760 SQUARE FEET	
632 Superstructure	1120 SQUARE FEET	
632 Superstructure	448 SQUARE FEET	
632 Superstructure	384 SQUARE FEET	

525 Paving Asphalt	70000 SQUARE FEET	1973
526 Paving Concrete	25000 SQUARE FEET	1973
620 Misc Com Bldg	476 SQUARE FEET	1973

Commercial

Use Code	425 Neighborhood shopping cCenter	Year Built	1973
Net Leaseable No. of Units		Gross Area	211,731.00

Commercial History

Section	Occupancy	Finished Square Ft.	Story Height	Stories
1	412 Neighborhood Shopping Ctr.	112,451.00	22.00	1
2	345 Parking Structure	99,280.00	12.00	1

Transfer

Deed Book	Page	Sale Price	Sale Date	Current Owner
		\$1,130,000	1/7/2011	IMBUS ENTERPRISES LIMITED PART
		\$0	10/1/1988	GC ACQUISITION CORP
		\$0	10/1/1988	G C ACQUISITION CORP

Value History

Year	Date	Land	Improvements	Total	Assessment Reason
2011	2011/09/15	\$917,810	\$212,190	\$1,130,000	Reappraisal, Update or Annual Equalization Changes by Board of Revision, Tax Appeals, Courts
2010	2011/09/15	\$928,300	\$201,700	\$1,130,000	
2008	2008/09/27	\$1,786,300	\$1,853,700	\$3,640,000	Reappraisal, Update or Annual Equalization
2008	2008/08/26	\$1,786,300	\$1,853,700	\$3,640,000	Changes to/from Exempt Property
2005	2005/09/25	\$1,786,300	\$1,853,700	\$3,640,000	Reappraisal, Update or Annual Equalization
2004	2005/07/01	\$1,786,300	\$1,853,700	\$3,640,000	Changes by Board of Revision, Tax Appeals, Courts
2002	2002/10/08	\$1,786,300	\$3,897,200	\$5,683,500	Reappraisal, Update or Annual Equalization
2001	2001/06/05	\$1,641,800	\$3,582,000	\$5,223,800	New Construction - Full Value
1999	2000/10/12	\$1,641,800	\$3,432,000	\$5,073,800	Miscellaneous
1999	2000/10/12	\$0	\$1,699,000	\$1,699,000	Miscellaneous
1999	1999/11/06	\$1,641,800	\$3,432,000	\$5,073,800	Reappraisal, Update or Annual Equalization
1996	1996/01/01	\$1,641,800	\$1,733,000	\$3,374,800	Miscellaneous

APPENDIX C
CPTED CHECKLISTS

Tactics to Reduce Crime through CPTED
(Crime Prevention Through Environmental Design)



An Informational Brochure to
Assist Property Owners

This checklist is designed to assist landlords, property owners, managers and tenants in reducing crime and disorder on their respective properties.

The ultimate success of utilizing CPTED principles relies on the following assumptions:

1. *The greater the risk of being seen or challenged; the less likely people are to commit a crime*
2. *The greater the effort required, the less likely they are to commit a crime.*
3. *The lesser the actual or perceived rewards, the less likely they are to commit a crime.*



EXTERIOR LIGHTING

Provide exterior lighting that enhances natural surveillance

- Locate elevated light fixtures (poles, light standards, etc.) in a coordinated manner that provides the desired coverage. The useful ground coverage of an elevated light fixture is roughly twice its height.
- For areas intended to be used at night, ensure that lighting supports visibility. Where lighting is placed at a lower height to support visibility for pedestrians, ensure that it is vandal-resistant.
- In areas used by pedestrians, ensure that lighting shines on pedestrian pathways and possible entrapment spaces.
- Place lighting to take into account vegetation, in its current and mature form, as well as any other element that may have the potential for blocking light.
- Avoid lighting of areas not intended for nighttime use to avoid giving a false impression of use or safety. If danger spots are usually vacant at night, avoid lighting them and close them off to pedestrians.
- Avoid climbing opportunities by locating light standards and electrical equipment away from walls or low buildings.
- Security bars and security doors should be visually permeable (see through).
- Wooden sticks or iron bars should be placed in tracks of sliding glass doors to enhance security.
- Enhanced window locks should also be considered for sliding doors, though fire exit considerations should always be balanced in this equation.
- Common hallways, inside buildings, should be illuminated.

ACCESS CONTROL

- Street numbers should be plainly visible and legible from the street or road fronting the property.
- In residential uses, each individual unit should be clearly numbered. In multiple building complexes, each building entry should clearly state the unit numbers accessed from the entry.
- In addition, unit numbers should be provided on each level or floor as well as individual residential units.
- Street numbers should be made of durable materials, preferably reflective or luminous, and unobstructed by foliage.
- For larger projects, provide maps and directional signage at public entry points and along internal public routes of travel.

ENTRANCES

- Entrances should be easily recognizable through design features and directional signage.
- Minimize the number of entry points.
- Add "emergency exit only" hardware and signage.

- *Ensure buildings are clearly identified by street number to prevent unintended access and to assist persons trying to find the building.*
- *Avoid confusion in locating building entrances.*

LANDSCAPING

- Use vegetation as barriers to deter access.
- Consider using thorny plants as an effective barrier.
- Avoid placement of vegetation that would enable access to a building or to neighboring buildings.
- Avoid placement of large trees, utility structures, fences, and gutters next to second story windows or balconies that could provide a means of access.
- The landscaping should not detract from pedestrian's ability to see or be seen.
- The landscaping should not provide hiding places and secluded areas where crime could flourish.

SECURITY AND SIGNAGE

- Consider the use of security hardware and/or human measures to reduce opportunities for unauthorized access, such as alarm systems or security guards.
- Upon entering the parking area, provide both pedestrians and drivers with a clear understanding of the direction to stairs, elevators, and exits.
- In multi-level parking areas, use creative signage to distinguish between floors to enable users to easily locate their cars.
- Provide signage in the parking area advising users to lock their cars, and parking is for residents and guests only.



Building exterior lacks address numerics and proper signage.

7

MAINTENANCE

- Ensure that landscaping is always well maintained, in order to give the impression of ownership, care, and security.
- Where possible, design or re-model multi-residential uses that no more than six to eight units share a common building entrance.
- Use materials, which reduce the opportunity for vandalism.
- Consider using strong, wear resistant laminate, impervious glazed ceramics, treated masonry products, stainless steel materials, anti-graffiti paints, and clear over sprays to reduce opportunities for vandalism.
- Where large walls are unavoidable, consider the use of vegetative screens.
- Avoid litter and the appearance the property is not cared for by property management.



Landscaping is well-maintained, however, foliage provides concealment for criminal element. Property owners should avoid placement of large shrubbery near windows and doorways.

Additional Resources

- CPTED Watch
 - <http://www.cpted-watch.com/>
- Crime Prevention through Environmental Design
 - <http://www.crimewise.com/library/cpted.html>
- National Institute of Justice
 - <http://www.ncjrs.gov/pdffiles/crimepre.pdf>



9

How to Use This Checklist

This checklist has been prepared to assist in identifying appropriate strategies to incorporate CPTED design principles into proposed projects in Federal Way. The guidelines included in this checklist expand on the principles found in FWRC 19.115.010.

It is recommended that the principles be reviewed initially to identify the approaches used to implement CPTED. Subsequent to this initial review, this checklist should be reviewed to identify additional strategies that may be applicable for a proposed project. Not all strategies are applicable to all projects. In addition, the CPTED principles may be addressed through strategies that are not listed.

Checklist Design

The checklist has been organized in the following manner:

<p>Functional Area <i>Specific design element addressed by CPTED principles</i></p> <p>Performance Standard <i>What is the desired outcome of applying CPTED principles to this functional area</i></p> <p>Strategy <i>Technique which can be used to implement CPTED principles</i></p> <p>Check Box <i>Indicate by checking this box if this strategy has been used in the proposed project</i></p> <p>Strategy Write-in <i>This section can be used to write in a strategy which is not specifically listed but is employed in the project</i></p> <p>Process Applicability <i>Indicates when in the review process the identified guideline should be assessed</i></p>	<table border="1"> <tr> <td style="width: 10%; text-align: center;">✓</td> <td style="width: 60%;"> Functional Area <i>Performance Standard</i> Strategy <input type="checkbox"/> Applicable during Site Plan Review <input type="checkbox"/> Applicable during Building Permit Review </td> <td style="width: 30%; text-align: center;"> Evaluation for Agency Use Only </td> </tr> <tr> <td colspan="3">Section 1.0: Natural Surveillance</td> </tr> <tr> <td style="text-align: center;">1.1</td> <td> Blind Corners <i>Avoid blind corners in pathways and parking lots.</i> </td> <td style="text-align: center;"> <input type="checkbox"/> Conforms <input type="checkbox"/> Revise <input type="checkbox"/> NA Comments: </td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td> Pathways should be direct. All barriers along pathways should be permeable (see through) including landscaping, fencing etc. <input type="checkbox"/> </td> <td></td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td> Consider the installation of mirrors to allow users to see ahead of them and around corners. <input type="checkbox"/> </td> <td></td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td> Other strategy used: _____ _____ _____ </td> <td></td> </tr> </table>	✓	Functional Area <i>Performance Standard</i> Strategy <input type="checkbox"/> Applicable during Site Plan Review <input type="checkbox"/> Applicable during Building Permit Review	Evaluation for Agency Use Only	Section 1.0: Natural Surveillance			1.1	Blind Corners <i>Avoid blind corners in pathways and parking lots.</i>	<input type="checkbox"/> Conforms <input type="checkbox"/> Revise <input type="checkbox"/> NA Comments:	<input type="checkbox"/>	Pathways should be direct. All barriers along pathways should be permeable (see through) including landscaping, fencing etc. <input type="checkbox"/>		<input type="checkbox"/>	Consider the installation of mirrors to allow users to see ahead of them and around corners. <input type="checkbox"/>		<input type="checkbox"/>	Other strategy used: _____ _____ _____	
✓	Functional Area <i>Performance Standard</i> Strategy <input type="checkbox"/> Applicable during Site Plan Review <input type="checkbox"/> Applicable during Building Permit Review	Evaluation for Agency Use Only																	
Section 1.0: Natural Surveillance																			
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<input type="checkbox"/>	Consider the installation of mirrors to allow users to see ahead of them and around corners. <input type="checkbox"/>																		
<input type="checkbox"/>	Other strategy used: _____ _____ _____																		

Site Plan and Building Permit Review

Certain guidelines and techniques are best applied during different points in the review process. To assist in facilitating CPTED review, guidelines which are best considered during site plan review are indicated with a "■" symbol. Guidelines that are most appropriately applied during building permit review are indicated with a "⊖" symbol.



Crime Prevention Through Environmental Design (CPTED) Checklist

Directions

Please fill out the checklist to indicate which strategies have been used to implement CPTED principles in your proposed project. Please check all strategies that are applicable to your project for each of the numbered guidelines. You may check more than one strategy for each guideline.

Your responses will be evaluated by City Staff, and will be integrated into the Site Plan and/or Building Permit review process.

Section and Performance Standard	✓ Functional Area Performance Standard	Evaluation for Agency Use Only
	Strategy <input type="checkbox"/> Applicable during Site Plan Review <input type="checkbox"/> Applicable during Building Permit Review	
Section 1.0 Natural Surveillance		
1.1	Blind Corners <i>Avoid blind corners in pathways and parking lots.</i> <hr/> <input type="checkbox"/> Pathways should be direct. All barriers along pathways should be permeable (see through) including landscaping, fencing etc. <input type="checkbox"/> <input type="checkbox"/> Consider the installation of mirrors to allow users to see ahead of them and around corners. ⊖ Other strategy used: _____ <input type="checkbox"/> _____ _____ _____	__Conforms __Revise __NA Comments:
1.2	Site and Building Layout <i>Allow natural observation from the street to the use, from the use to the street, and between uses</i> <hr/>	__Conforms __Revise __NA Comments:

Section and Performance Standard	<input checked="" type="checkbox"/> Functional Area Performance Standard Strategy <input checked="" type="checkbox"/> Applicable during Site Plan Review <input type="checkbox"/> Applicable during Building Permit Review	Evaluation for Agency Use Only
For Non-Single Family Development	<input type="checkbox"/> Orient the main entrance towards the street or both streets on corners. ■ <input type="checkbox"/> Position habitable rooms with windows at the front of the dwelling. ■ Access to dwellings or other uses above commercial/ retail development should not be from the rear of the building. ■ <input type="checkbox"/> Offset windows, doorways and balconies to allow for natural observation while protecting privacy. ■	
For Commercial/ Retail/ Industrial and Community Facilities	<input type="checkbox"/> Locate main entrances/exits at the front of the site and in view of the street. ■ <input type="checkbox"/> If employee entrances must be separated from the main entrance, they should maximize opportunities for natural surveillance from the street. ■ <input type="checkbox"/> In industrial developments, administration/offices should be located at the front of the building. ■	
For Surface Parking and Parking Structures	<input type="checkbox"/> Avoid large expanses of parking. Where large expanses of parking are proposed, provide surveillance such as security cameras. ■ <input type="checkbox"/> Access to elevators, stairwells and pedestrian pathways should be clearly visible from an adjacent parking area. ■ <input type="checkbox"/> Avoid hidden recesses. ■ <input type="checkbox"/> Locate parking areas in locations that can be observed by adjoining uses. ■	
For Common/ Open Space Areas	<input type="checkbox"/> Open spaces shall be clearly designated and situated at locations that are easily observed by people. Parks, plazas, common areas, and playgrounds should be placed in the front of buildings. Shopping centers and other similar uses should face streets. ■ Other strategy used: _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____	

Section and Performance Standard	<input checked="" type="checkbox"/> Functional Area Performance Standard Strategy <input checked="" type="checkbox"/> Applicable during Site Plan Review <input type="checkbox"/> Applicable during Building Permit Review	Evaluation for Agency Use Only
1.3	Common/Open Space Areas and Public On-Site Open Space <i>Provide natural surveillance for common/open space areas.</i> <hr/> <input type="checkbox"/> Position active uses or habitable rooms with windows adjacent to main common/open space areas, e.g. playgrounds, swimming pools, etc., and public on-site open space. ■ <input type="checkbox"/> Design and locate dumpster enclosures in a manner which screens refuse containers but avoids providing opportunities to hide. ■ <input type="checkbox"/> Locate waiting areas and external entries to elevators/stairwells close to areas of active uses to make them visible from the building entry. ⊖ <input type="checkbox"/> Locate seating in areas of active uses. ⊖ Other strategy used: _____ <input type="checkbox"/> _____ _____	__ Conforms __ Revise __ NA Comments:
1.4	Entrances Provide entries that are clearly visible. <hr/> <input type="checkbox"/> Design entrances to allow users to see into them before entering. ■ <input type="checkbox"/> Entrances should be clearly identified (Signs must conform to FWRC 19.140.060. Exempt Signs. <i>(Applicable during Certificate of Occupancy Inspection).</i>) Other strategy used: _____ <input type="checkbox"/> _____ _____	__ Conforms __ Revise __ NA Comments:
1.5	Fencing <i>Fence design should maximize natural surveillance from the street to the building and from the building to the street, and minimize opportunities for intruders to hide.</i>	__ Conforms __ Revise __ NA Comments:

Section and Performance Standard	<input checked="" type="checkbox"/> Functional Area Performance Standard Strategy ■ Applicable during Site Plan Review ⊖ Applicable during Building Permit Review	Evaluation for Agency Use Only
	<input type="checkbox"/> Front fences should be predominantly open in design, e.g. pickets or wrought iron, or low in height. ⊖ <input type="checkbox"/> Design high solid front fences in a manner that incorporates open elements to allow visibility above the height of five feet. ⊖ <input type="checkbox"/> If noise insulation is required, install double-glazing at the front of the building rather than solid fences higher than five feet. ⊖ <input type="checkbox"/> Other strategy used: _____ _____	
1.6	Landscaping <i>Avoid landscaping which obstructs natural surveillance and allows intruders to hide.</i> <input type="checkbox"/> Trees with dense low growth foliage should be spaced or their crown should be raised to avoid a continuous barrier. ■ <input type="checkbox"/> Use low groundcover, shrubs a minimum of 24 inches in height, or high-canopied trees (clean trimmed to a height of eight feet) around children's play areas, parking areas, and along pedestrian pathways. ■ <input type="checkbox"/> Avoid vegetation that conceals the building entrance from the street. ■ <input type="checkbox"/> Other strategy used: _____ _____	___ Conforms ___ Revise ___ NA Comments:
1.7	Exterior Lighting <i>Provide exterior lighting that enhances natural surveillance. (Refer to FWRC 19.115.050(7)(a) for specific lighting requirements.)</i> <input type="checkbox"/> Prepare a lighting plan in accordance with Illuminating Engineering Society of America (IESA) Standards, which addresses project lighting in a comprehensive manner. Select a lighting approach that is consistent with local conditions and crime problems. ■	___ Conforms ___ Revise ___ NA Comments:

Section and Performance Standard	<input checked="" type="checkbox"/> Functional Area Performance Standard Strategy ■ Applicable during Site Plan Review ⊖ Applicable during Building Permit Review	Evaluation for Agency Use Only
	<input type="checkbox"/> Locate elevated light fixtures (poles, light standards, etc.) in a coordinated manner that provides the desired coverage. The useful ground coverage of an elevated light fixture is roughly twice its height. ■ <input type="checkbox"/> For areas intended to be used at night, ensure that lighting supports visibility. Where lighting is placed at a lower height to support visibility for pedestrians, ensure that it is vandal-resistant. ⊖ <input type="checkbox"/> Ensure inset or modulated spaces on a building facade, access/egress routes, and signage is well lit. ⊖ <input type="checkbox"/> In areas used by pedestrians, ensure that lighting shines on pedestrian pathways and possible entrapment spaces. ⊖ <input type="checkbox"/> Place lighting to take into account vegetation, in its current and mature form, as well as any other element that may have the potential for blocking light. ⊖ <input type="checkbox"/> Avoid lighting of areas not intended for nighttime use to avoid giving a false impression of use or safety. If danger spots are usually vacant at night, avoid lighting them and close them off to pedestrians. ⊖ <input type="checkbox"/> Select and light "safe routes" so that these become the focus of legitimate pedestrian activity after dark. ■ <input type="checkbox"/> Avoid climbing opportunities by locating light standards and electrical equipment away from walls or low buildings. ⊖ <input type="checkbox"/> Use photoelectric rather than time switches for exterior lighting. ⊖ <input type="checkbox"/> In projects that will be used primarily by older people (retirement homes, congregate care facilities, senior and/or community centers, etc.) provide higher levels of brightness in public/common areas. ⊖ <input type="checkbox"/> Other strategy used: _____ _____	
1.8	Mix of Uses In mixed use buildings increase opportunities for natural surveillance, while protecting privacy.	___ Conforms ___ Revise ___ NA Comments:

Section and Performance Standard	<input checked="" type="checkbox"/> Functional Area Performance Standard Strategy <input checked="" type="checkbox"/> Applicable during Site Plan Review <input type="checkbox"/> Applicable during Building Permit Review	Evaluation for Agency Use Only
	<input type="checkbox"/> Where allowed by city code, locate shops and businesses on lower floors and residences on upper floors. In this way, residents can observe the businesses after hours while the residences can be observed by the businesses during business hours. ■ <input type="checkbox"/> Include food kiosks, restaurants, etc. within parks and parking structures. ■ Other strategy: used _____ _____ <input type="checkbox"/> _____ _____	
1.9	Security Bars, Shutters, and Doors <i>When used and permitted by building and fire codes, security bars, shutters, and doors should allow observation of the street and be consistent with the architectural style of the building.</i> <input type="checkbox"/> Security bars and security doors should be visually permeable (see-through). ⊖ Other strategy used: _____ <input type="checkbox"/> _____	___ Conforms ___ Revise ___ NA Comments:

Section and Performance Standard	<input checked="" type="checkbox"/> Functional Area Performance Standard Strategy <input checked="" type="checkbox"/> Applicable during Site Plan Review <input type="checkbox"/> Applicable during Building Permit Review	Evaluation for Agency Use Only
Section 2.0	Access Control	
2.1	Building Identification <i>Ensure buildings are clearly identified by street number to prevent unintended access and to assist persons trying to find the building. Identification signs must conform to FWRC 19.140.060. Exempt Signs.</i> <input type="checkbox"/> Street numbers should be plainly visible and legible from the street or road fronting the property. ⊖	___ Conforms ___ Revise ___ NA Comments:

Section and Performance Standard	<input checked="" type="checkbox"/> Functional Area Performance Standard Strategy <input checked="" type="checkbox"/> Applicable during Site Plan Review <input type="checkbox"/> Applicable during Building Permit Review	Evaluation for Agency Use Only
	<input type="checkbox"/> In residential uses, each individual unit should be clearly numbered. In multiple building complexes, each building entry should clearly state the unit numbers accessed from than entry. In addition, unit numbers should be provided on each level or floor. ⊖ <input type="checkbox"/> Street numbers should be made of durable materials, preferably reflective or luminous, and unobstructed (e.g. by foliage). ⊖ <input type="checkbox"/> For larger projects, provide location maps (fixed plaque format) and directional signage at public entry points and along internal public routes of travel. ⊖ Other strategy used: _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____	
2.2	Entrances <i>Avoid confusion in locating building entrances.</i> <hr/> <input type="checkbox"/> Entrances should be easily recognizable through design features and directional signage. (Signs must conform to FWRC 19.140.060. Exempt Signs. ■ <input type="checkbox"/> Minimize the number of entry points. ■ Other strategy used: _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____	__ Conforms __ Revise __ NA Comments:
2.3	Landscaping <i>Use vegetation as barriers to deter unauthorized access.</i> <hr/> <input type="checkbox"/> Consider using thorny plants as an effective barrier. ⊖ Other strategy used: _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____	__ Conforms __ Revise __ NA Comments:
2.4	Landscaping Location <i>Avoid placement of vegetation that would enable access to a building or to neighboring buildings.</i>	__ Conforms __ Revise __ NA Comments:

Section and Performance Standard	<input checked="" type="checkbox"/> Functional Area Performance Standard Strategy <input checked="" type="checkbox"/> Applicable during Site Plan Review <input checked="" type="checkbox"/> Applicable during Building Permit Review	Evaluation for Agency Use Only
	<input type="checkbox"/> Avoid placement of large trees, garages, utility structures, fences, and gutters next to second story windows or balconies that could provide a means of access. <input checked="" type="checkbox"/> Other strategy used: _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____	
2.5	Security <i>Reduce opportunities for unauthorized access</i> _____ <input type="checkbox"/> Consider the use of security hardware and/or human measures to reduce opportunities for unauthorized access. (<i>Applicable during Certificate of Occupancy Inspection</i>). Other strategy used: _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____	__ Conforms __ Revise __ NA Comments:
2.6	Signage Insure that signage is clearly visible, easy to read and simple to understand [Signs must conform to FWRC 19.140.060. Exempt Signs]. _____ <input type="checkbox"/> Use strong colors, standard symbols, and simple graphics for informational signs. <input checked="" type="checkbox"/>	__ Conforms __ Revise __ NA Comments:
For Surface Parking and Parking Structures	<input type="checkbox"/> Upon entering the parking area, provide both pedestrians and drivers with a clear understanding of the direction to stairs, elevators, and exits. <input checked="" type="checkbox"/> <input type="checkbox"/> In multi-level parking areas, use creative signage to distinguish between floors to enable users to easily locate their cars. <input checked="" type="checkbox"/> <input type="checkbox"/> Advise users of security measures that are in place and where to find them, i.e. security phone or intercom system. <input checked="" type="checkbox"/> <input type="checkbox"/> Provide signage in the parking area advising users to lock their cars. <input checked="" type="checkbox"/>	

Section and Performance Standard	<input checked="" type="checkbox"/> Functional Area Performance Standard Strategy <input checked="" type="checkbox"/> Applicable during Site Plan Review <input checked="" type="checkbox"/> Applicable during Building Permit Review	Evaluation for Agency Use Only
	<input type="checkbox"/> Where exits are closed after hours, ensure this information is indicated at the parking area entrance. ⊖ Other strategy used: _____ <input type="checkbox"/> _____	
Section 3.0 Ownership		
3.1	Maintenance <i>Create a "cared for" image</i> _____ <input type="checkbox"/> Ensure that landscaping is well maintained, as per FWRC 19.125.090, in order to give an impression of ownership, care, and security. (Ongoing). <input type="checkbox"/> Where possible, design multi-unit residential uses such that no more than six to eight units share a common building entrance. ■ Other strategy used: _____ <input type="checkbox"/> _____	__ Conforms __ Revise __ NA Comments:
3.2	Materials <i>Use materials, which reduce the opportunity for vandalism.</i> _____ <input type="checkbox"/> Consider using strong, wear resistant laminate, impervious glazed ceramics, treated masonry products, stainless steel materials, anti-graffiti paints, and clear over sprays to reduce opportunities for vandalism. Avoid flat or porous finishes in areas where graffiti is likely to be a problem. ⊖ <input type="checkbox"/> Where large walls are unavoidable, refer to FWRC 19.125.040(21) regarding the use of vegetative screens. ⊖ <input type="checkbox"/> Common area and/or street furniture shall be made of long wearing vandal resistant materials and secured by sturdy anchor points, or removed after hours. ⊖ Other strategy used: _____ <input type="checkbox"/> _____	__ Conforms __ Revise __ NA Comments:

APPENDIX D ECONOMIC DEVELOPMENT POLICIES

The Ohio Revised Code provides legislation regarding taxation for Hamilton County and the City of Cincinnati. In addition to the statewide regulations, municipalities may levy additional taxes on individuals, businesses, and goods and services within their boundaries, as part of local ordinances. The Ohio Revised Code provides definitions of each tax, as well as the rate schedules and formulas for assessing taxes. The State of Ohio has implemented tax reforms over the past decade in order to make the state more “business-friendly” in order to attract new and retain existing businesses. This has included repealing corporate franchise and tangible personal property taxes (City of Cincinnati Economic Development Department, 2012).

The Ohio Revised Code provides legislation regarding income, property, sales, and commercial activities (CAT) taxes, among other types of taxes.

Personal income taxes are based on the total taxable income earned in the State of Ohio by an individual during a calendar year. The personal income tax rates are determined by applying a base percentage tax rate as determined by one’s annual taxable income, which is divided into 9 brackets, and any excess income over the base rate is taxed at an additional percentage.

In addition to the personal income tax levied by the State of Ohio, the City of Cincinnati has levied a local earnings tax. People who live and/or work within the City of Cincinnati are subject to a 2.1% tax on individual income and net profits (City of Cincinnati Economic Development Department, 2012). Since our site sits just outside the municipal boundary of the City of Cincinnati, businesses and residents within the

site are not affected by this tax. This can be used as a competitive advantage to attract businesses and individuals to work or live within the site rather than in the City proper.

Sales taxes are provided for in the Ohio Revised Code, but each county and municipality has the power to determine their own rate of taxation. These taxes are levied on goods and services sold in the locality, with various exceptions or additional taxes based on the type of goods or services. Hamilton County has a sales tax of 6.5%.

Real property, or real estate, is subject to property tax in the State of Ohio. This tax includes land and improvements to land, such as buildings. The taxable value of real estate is 35% of market value, and the effective tax rate applied to the assessed value varies by school district (City of Cincinnati Economic Development Department, 2012).

Real property taxes are calculated based on the following formula:

$$(\text{Actual value}) \times (.35) = \text{Assessed value}$$

$$(\text{Assessed value}) \times (\text{local millage}) = \text{Real property tax}$$

The millage rate is the amount per \$1,000 that is used to calculate taxes on property. They are most often found in real property taxes, where the expressed millage rate is multiplied by the total taxable value of the property to arrive at the property taxes due. Millage rates are most commonly used by school boards to determine the tax rate used within individual school district boundaries. Millage rates vary by school district, as well as for individual levies for various programs, such as public health and aging services.

The Commercial Activities Tax (CAT) is a tax imposed on the privilege of doing business in Ohio. The CAT is measured by Ohio gross receipts and paid by businesses

located both in and outside Ohio, which operate in Ohio. The CAT is paid by any business with Ohio gross receipts of \$150,000 or more in a calendar year. Businesses with annual gross receipts of \$150,000 or less are not subject to the CAT. Annual Ohio gross receipts from \$150,001 - \$1,000,000 are subject to a minimum \$150 tax. For Ohio gross receipts exceeding \$1,000,000, the rate is .26%. Out-of-state gross receipts are exempt. The CAT is a replacement tax for the Ohio Corporate Franchise and tangible personal property taxes, and has made the State of Ohio more competitive in attracting businesses in the Midwest.

In order to attract new and retain existing businesses, municipalities have developed a vast array of tax abatement and incentive programs. These programs outline a list of requirements, and if met, the business is eligible to receive the benefits of the given program. One of the most frequently used incentive programs is Tax Increment Financing (TIF). Tax Increment Financing programs are used when a developer or business is making a large-scale investment which requires substantial public improvements to satisfy the requirements of development regulations and ordinances of the area. In the City of Cincinnati, the land which is to be redeveloped must be acquired by the City with its own funds, and the City must retain title to the land or the project must meet “public purpose” criteria (City of Cincinnati Economic Development Department, 2012). TIF funding helps offset the costs for the developer by allowing the municipality to finance the construction of the public improvements. Public improvements include upgrades to roads, utility lines, and other services used by the general public. A TIF-funded project can be completed in conjunction with a private development if the TIF-funded project serves and eligible public purpose.

The City of Cincinnati has developed several other types of tax abatements and incentives. The Job Creation Tax Credits program is offered in conjunction with the State of Ohio. The Job Creation Tax Credits are non-refundable income tax credits against the municipal earnings tax. To receive the credit, an employer must create at least 25 net, new jobs in the City of Cincinnati, and commit to keeping those jobs in the City for at least twice the term of the incentive (City of Cincinnati Economic Development Department, 2012). This program intends to help offset the capital costs of creating new jobs or the costs of a new business relocating to Cincinnati.

The Property Investment Reimbursement Agreement (PIR) can be offered to a company that is considering moving to or expanding in the City of Cincinnati. This incentive is designed to offset the costs of capital investments and encourage job creation (City of Cincinnati Economic Development Department, 2012). To be eligible for this program, the employer must create a net of at least 25 new jobs in the City of Cincinnati and commit to keeping those jobs in Cincinnati for at least twice the term of the incentive (City of Cincinnati Economic Development Department, 2012). The Property Investment Reimbursement is a cash payment from the City of Cincinnati which is intended to offset a portion of a company's net profits tax obligation. The payment is a percentage of either: the earnings tax generated from the net, new employees hired by the company, or the annualized cost of the capital investment. This program does not require matching funds from the State of Ohio (City of Cincinnati Economic Development Department, 2012).

The City of Cincinnati also offers a program called the Community Reinvestment Area Property Tax Abatement. This program applies to companies considering building

or renovating a commercial facility within the City limits. To qualify, the company must demonstrate that the project is not financially viable without the abatement (City of Cincinnati Economic Development Department, 2012). If a company is making an investment that will result in a substantial change in its property tax obligation, and are creating jobs, they may be eligible. The abatement applies to taxes levied by the Cincinnati Public School District, City of Cincinnati, and Hamilton County, which uses these property taxes to fund a wide variety of local service needs (City of Cincinnati Economic Development Department, 2012). The City of Cincinnati also offers an additional abatement for properties achieving Leadership in Energy and Environmental Design (LEED) certification through the U.S. Green Building Council (City of Cincinnati Economic Development Department, 2012). The size of these abatements varies between projects and depends upon the taxable value of the improvements made to a property (City of Cincinnati Economic Development Department, 2012).

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BIOGRAPHICAL SKETCH

Elizabeth Ann Nocheck is the daughter of Michael and Theresa Nocheck and oldest sister of Andrew, Molly, Rebecca, and Patrick Nocheck. She is a native resident of Cincinnati, Ohio, where she attended Mother of Mercy High School and graduated in 2005 with awards for excellence in academics, athletics, design, and leadership.

Elizabeth earned her Bachelors of Urban Planning degree from the University of Cincinnati's prestigious College of Design, Architecture, Art and Planning in 2010. While at the University of Cincinnati, Elizabeth was a member of the Women's Varsity Rowing Team and earned academic and athletic scholarships. She earned her Master of Arts of Urban and Regional Planning from the University of Florida's College of Design, Construction and Planning in 2013. Career plans include working towards creating safe, sustainable communities and pursuing her AICP certification.