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Crime prevention through environmental design: An analysis of the Boulevard Mall

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CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN:

AN ANALYSIS OF THE BOULEVARD MALL

A Thesis submitted in partial satisfaction
of the requirement for the degree of
Bachelor of Arts
in

Environmental Studies
UNIVERSITY OF NEVADA
Las Vegas

by

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ABSTRACT

Crime Prevention Through Environmental Design: An Analysis of The Boulevard Mall

by

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Many case studies have been published that report a decrease in crime as a result of Crime Prevention Through Environmental Design (CPTED). Although methodologies and results of some studies have been questioned, there is agreement that the designed environment can influence human behavior.

Data in this study were accumulated by the investigation of a local mall. Mall management and head of security reported a decrease in all types of crime after improving and adding security measures for customers and store employees. My hypothesis was the mall provided a high number of CPTED features which would result in a low number of police calls for service. Police calls for service from 1995 through 1997 and CPTED elements were analyzed. Results indicated a decrease in the number of police calls for service at the mall. The conclusions was that customers and store employees at the mall feel safer due to added and improved CPTED-like features.

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**COMPARISON OF CRIME
RELATED CALL FOR SERVICE**

**BOULEVARD MALL
1995 - 1997**

	1995	1996	1997
BURGLARY	9	7	4
STOLEN VEHICLE	16	13	8
PETITE/GRAND LARCENY	12	7	5
DISTURBANCES	50	45	35
ASSAULT BATTERY	8	5	2

General Description

Boulevard Mall

The Boulevard Mall is the biggest mall in Nevada, its a long rectangular 1.2 million square feet. There are four major department stores, and 120 specialty stores. There is a food court that consist of 13 vendors, and there are three restaurants.

There are six main entrances to the mall, but a total of nineteen when including the entrances of the four department stores. There are nineteen corridors, and nine of them can be used as entrances if people know about them but they are mainly used for deliveries. There are six major areas where employees and customers can park, not including the three parking decks. (MAPS AND PICTURES APPENDIX A)

Analysis of the Area

The Boulevard Mall is located at 3528 South Maryland Parkway between Spring Mountain Road and Desert Inn Road. The mall caters to everyone locally in Clark County, as well as, tourists from out -of -state and from other countries. Areas surrounding the mall are typically heavy commercial sites with other areas having a mix of

single-family and multifamily land uses. There are two schools located directly behind the mall, and many teenagers and children travel through the mall to get to the other side.

The Clark County population has rapidly increased over the last twenty years. The influx of people has created several social problems such as: air pollution, traffic jams, over crowded schools, and many other problems. Population figures released by the Census Bureau in late 1995 revealed Las Vegas metropolitan area grew by 26 percent between 1990 and 1994, making it the fastest growing metropolitan area in the United States (Vogel, 1995). Census figures pegged the state's population at 1.5 million in July, 1995 an increase of 88,000 people over the same time the previous year (Vogel, 1995).

Crime has been a growing social problem in southern Nevada due to rapid urbanization. Jail crowding has been a serious problem in the metropolitan area region for many years. Researchers studying the Clark County Detention Center claim the jail is in immediate need of relief from overcrowding. By 1994 it was becoming increasingly common for the jail to be operating at double capacity. Between 1975 and 1995, the incarceration rate in Nevada grew by 325 percent (Vogel, 1995). These increases gave Nevada the highest incarceration rate in the country between 1986 and 1992 (Vogel, 1995). Also, the Crime Statistics 1994, Nevada is the seventh most dangerous state in the U.S. According to FBI statistics, the number of major crimes reported to police in Nevada increased 13 percent between 1993 and 1994, the fastest increase in the nation for that period (Feagin, 1995). Homicides are also increasing in Las Vegas, for example, there were close to 300 murders in Clark County in 1995 (Vogel, 1995).

Crime Prevention is formally defined as: The anticipation, recognition, and appraisal of a crime risk and the initiation of some action to remove it (NCPI, 1986). Crime prevention guesses that a criminal suspect, due to whatever reason, the physical factors like landscaping can be altered to reduce or prevent crime. This is done by a method called situational crime prevention (SCP). Situational crime prevention deals with measures directed at specific forms of crime. For example, management or design changes that will increase the risk of detection of potential criminal suspects (Graham, 1990).

A major problem is our criminal justice system is not effectively dealing with crime. The current formal process of criminal justice of apprehension, prosecution, sentences, punishment, rehabilitation has shown to have limited effect (Graham, 1990). The threat of being caught in the act and ultimately punished for a crime is so low as to be no deterrent at all. Many crimes are not reported to the, police; of those reported, very few suspects are convicted and sentenced to prison (Jeffery, 1977).

From Jeffery's 1971 book, Crime Prevention Through Environmental Design, nearly half of all crimes go unreported in the United States. From the total number of crimes reported in 1971, there was only a 22 percent arrest rate. From this small number of arrests only 20 percent of the suspects were sentenced, and from this group only 30 percent ended up in jail. Data for 1994 indicated a total of 12,586,277 crimes reported in

the U.S., 2,693,453 arrests (Uniform Crime Reports, 1994), 39,647 sentences, and 30,860 imprisonments (Bureau of Justice, 1994).

Shoppers are making changes because of fear of crime. America's research group reported that 43 percent of all people do not shop at night, 80 percent of those that make \$75,000 a year do not shop at all, 25 percent feel unsafe at a mall, 30 percent do not carry cash rather pay by credit card, and one in seven say they will cut back on shopping in the coming year (Beemer, 1994).

This study investigated whether Crime Prevention Through Environmental Design techniques used at a local mall affected the number of police calls for service. I believe the incorporation of CPTED features into the Boulevard Mall will reduce the amount of crime.

CHAPTER 2

METHODS AND PROCEDURES

The National Crime Prevention Institute defines CPTED as: The proper design and the effective use of the built environment can lead to a reduction in the incidence and fear of crime, and to a better quality of life. It's important to understand that both design and use are necessary for CPTED to be fully effective. The present study focused on situational crime prevention efforts known as Crime Prevention through Environmental Design (CPTED). CPTED principles focus on four major strategies that should be

4

present in the built environment to prevent the occurrence of crimes. These are: 1) surveillance, 2) territorial Reinforcement, 3) access control, and 4) maintenance

(Crowe, 1991). As recorded by Plaster 1993, these principles encompass the following ideas:

Natural Surveillance: placement of physical features and the people in such a way to maximize visibility. For example, lighting of public spaces, and walkways at night. Whether from windows, surveillance cameras or personal vision reduces the chance of crime.

Territorial Reinforcement: use of physical attributes that express ownership such as fences, speed bumps, art, signage, and landscaping.

Access Control: Designing property that restricts or controls the flow of vehicle and pedestrian traffic in desired manners is a preferred CPTED practice. The basic idea is that you want to get people to use a specified area. The more they do, the less chance of criminal activity.

Maintenance: the use of management to hire qualified individuals to upkeep the property such as: minor repairs or landscaping.

Evaluation Criteria

The study focused on two main questions. These were: 1) What CPTED features were present at the mall? and 2) Did the mall have a need for police services on a regular basis?

The evaluation of CPTED features are based on four strategies. These are 1) natural surveillance, 2) territorial reinforcement, 3) access control, and 4) maintenance. The

characteristics selected for evaluation are based on four major CPTED strategies (Crowe, 1991). They include the following:

- 1) Natural Surveillance Measures
 - Location of gathering areas
 - Good natural surveillance
 - Access Control
 - Out of view of undesired users
 - Lighting
 - Window placement
 - Door placement
 - Clear lines of sight

- 2) Territorial Reinforcement Measures
 - Neighborhood Watch Program
 - Enhancements of ownership
 - Propriety behaviors

- 3) Access Control
 - Clear border definition
 - Fences
 - Shrubbery
 - Clearly marked transitional zones
 - Signs
 - Doors locked
 - Extra locks
 - Burglary alarm
 - Security officers

- 4) Property Maintenance
 - Upkeep of building
 - Upkeep of grounds

Changes to Architectural and Landscape Design Guidelines are illustrated in Timothy Crowe's 1991 book, Crime Prevention Through Environmental Design and Space Management Concepts. This book contains guidelines for every type of building project and building area from schools, convenience stores, residences, and parking garages. Nine major CPTED strategies that can be used in any combination are identified. These are:

- 1) Provide clear border definition of controlled space
- 2) Provide clearly marked transitional zones which indicate movement from public to semi-public to private space
- 3) Relocate gathering areas to locations of natural surveillance and access control; as to locations away from the view of would be offenders
- 4) Place safe activities in unsafe locations to bring along the natural surveillance of these activities like neighborhood watch program
- 5) Place unsafe activities in safe spots to overcome the vulnerability of these activities natural surveillance and access control of the safe area
- 6) Redesignate the use of space to provide natural barriers to conflicting activities
- 7) Improve scheduling of space to allow for effective use and appropriate "critical intensity"
- 8) Redesign or revamp space to increase the perception or reality of natural surveillance and
- 9) Overcoming distance and isolation through communication

Some of these strategies address a single CPTED principle while others may contribute to two or all three principles. The strategies to be used depend on the area.

Strategies primarily associated with natural surveillance include:

Location of Unsafe Activities
Perception of Surveillance
Communication

The most desirable features of a space should be located in areas of maximum natural surveillance.

Strategies primarily associated with access control include:

Definition of Property Borders
Transitional Zones

Features that serve as appropriate border definition include fences, shrubs, and signs. Transitional zones create the perception of moving from public to semi-public to semi-private to private space.

Features that enhance the perception of safety should be optimized. These include keeping trees and shrubs trimmed, providing views of the grounds from windows, doors, and security officers. Effective communication between property managers, and security officers allows for increase in reporting crimes. Portable radios, pagers, cellular phones all help to patrol the space.

Other features that increase the perception of safety include:

Barriers between Conflicting Uses
Proper Scheduling of Spaces

Incompatible uses should be separated such as: the distance of a parking lot should

stay level and not change in elevation. This hinders one sight from one end of a the parking lot to the other end.

CPTED is becoming popular for a couple of reasons. It costs less than other methods of dealing with crime. For example, using a brighter light bulb, adding light fixtures or trimming the limbs of trees to improve visibility compared to the cost to prosecute, sentence, and imprison criminals.

CHAPTER 3

Results

Boulevard Mall Evaluation

Natural Surveillance

The overall site design provides a good level of surveillance for the whole mall. This is due to the long rectangular shape design which allows an individual to look almost the entire length of the mall. There are twelve to twenty-four light poles per parking lot depending on the size, and each parking lot was lit well. The middle of 1996, maintenance engineers decided a high pressure sodium bulb would brighten the surrounding of the mall even more. The twelve light poles on top of the parking decks magnify their surrounding areas because of the new light bulbs. They also, attached extra lighting fixtures to every other light pole, so there would be no dark areas or blind spots at night. The parking decks have new lighting fixtures, twenty-four per isle, and the

white light bulbs magnify the brightness allowing customers to view the whole level of the parking deck. The lighting fixtures along the walk ways outside have improved using the same light bulb, many customers are taking the outside route to go from department store to department store. The addition of the new light bulb provides an excellent line of sight for customers and employees. The added fixtures makes sure that all blind spots and dark areas are well lit, so customers are not afraid to walk to their vehicle at night.

The landscaping is well managed by a contract landscaping company. They come every two weeks to a month depending on the seasons. All the trees and shrubs that occupy the walkways, the parking lots and decks are well trimmed so a customer or an employee's visibility is clear at night.

The surveillance room is a state of the art place. There are 142 cameras at the mall. There are two surveillance operators who monitor the closed circuit television system (CCTV). Surveillance operators can watch any criminal suspect or activity anywhere on the mall property except the bathrooms and inside stores. The major department stores have their own video surveillance and security. Surveillance operators keep in contact with security officers through portable radios, and they also monitor Metro Police southeast communications with a scanner. When an incident is caught on tape, and the police arrive on the scene they can review the tape and get a copy. This makes it easy for

for police officers to make an arrest or identify the suspect for later arrest. The tapes record 24 hours of material Monday through Sunday, so if anything does happen it can be reviewed and kept as evidence. Any customer can ask for a tour of the surveillance room. This reinforces the message that someone is watching out for their safety and property.

The mall recently built a security podium at the entrance of the food court. A security officer is always there to help customers. It allows the officer to view all of A-mall which is from Macys to Sears and the food court for any suspicious activity such as: gang members or drug dealers. The officer gets emergency calls on the phone then dispatches security officers to that incident. It allows customers to feel safe to know where a security officer is at all times, so they do not waste time looking for one in case of an emergency. There is a pamphlet anyone can pick-up about mall security at the podium, and it refers to safety measures customers should take when shopping anywhere. There is a television monitor at the podium displaying live video surveillance of the mall. (SECURITY INFORMATION APPENDIX B)

Access Control

The property boundaries are well defined with four foot fencing at the southeast part of the mall, and eight foot red cinder blocks at the northeast part. This is to protect homeowners from any problems, and to provide privacy to an area that gets many

strangers. The west part of the mall has no physical barriers except the sidewalk which defines property boundary. This allows customers to distance themselves closer to the mall because they know where the property boundary is located. They feel safer parking 25 feet away instead of 100 feet away, and positioning their vehicle in front of an store entrance way so it more viewable by others.

There are ten driveways to the mall, and each driveway has only one entrance and exit lane. This control levels of speed so customers are aware of suspicious vehicles. There are public policy signs, and video surveillance signs, that let customers know undesirable criminals are not welcomed on mall property.

Territoriality

Like the Neighborhood Watch Program, the mall started several programs to ensure safety. The Watchful Eye Program is where merchants will share theft-reducing tips and learn how to improve customer safety. Also, customers can walk into any store, and report an incident to a store employee who in turn will call mall security. The Boulevard Mall is a founding member of Las Vegas Retail Loss Prevention Association - a network of retail security and law enforcement personnel. This allows department store security to work with mall security to catch criminals. They both share information about suspicious vehicles or individuals in the area. Also, Code Adam child-alert system will

use mall personnel to finding missing children. Once alerted, mall personnel will be given a description of the child and sent to cover the exits. There are child ID kits available at the security podium. The Boulevard Trick-or-Treat, the mall's annual Halloween event where parents take their kids to get safe candy and be in a safe environment. There is a monthly security newsletter designed to keep retailers of the new or improved security upgrades. The Boulevard mall with Metro Police sponsor National Crime Prevention month every year.

The security staff is made up of three sergeants, and fourteen officers. During the day there are usually two sergeants, three to four bike officers, and four to five inside officers, on patrol. A new six-horse unit has been added to patrol the 42 acre parking areas on evenings and weekends. Mall management looks to hire qualified individuals based on their experience, attitude, knowledge. Each officer goes through hours of training for CPR and first aid, for pepper spray, for PR-24 police baton, and for gang awareness. The officer of the day keeps a duty log recording events of the day, and then he or she gives it to the head of security for review. Each officer learns how to write all types of reports. The customers feel safe around competent individuals, who know what to do in emergencies.

Maintenance

The maintenance consists of engineers, landscapers, and a clean-up crew to take care

of any problems that involve the mall. The engineers make sure the electrical, plumbing,

air conditioning, carpentry, and painting are functioning properly. Repairs are fixed before the day ends or within an hour. The landscapers make sure trees and shrubs do not hinder anyone's visibility. The clean-up crew makes the mall look very clean by making sure garbage cans are not overflowing, and cleaning up spills so no one slips and fall. They all have portable radios, so if they see anything suspicious they can report it to security. They can aid customers about the mall whether its about a location or an incident.

Case Studies

The city of Saint Louis, Missouri started improvements to street lighting in 1964. The program was implemented in an urban business area which consisted of large department stores, banks, hotels, and investment companies. The police department compared 1963, when crime was high in the area, to 1965 when the improvements were made. The data indicated all types of assaults committed against people went down 40.8 percent, auto theft went down 28.6 percent, and burglaries went down 12.8 percent (Street and Highway Bureau, 1972).

The Union Avenue corridor is a commercial strip 50 blocks long and 4 blocks wide located in Portland, Oregon. Surrounding Union Avenue are predominantly single-family residences. The corridor faced deterioration, increasing crime, and a general decline in

conditions during the early 1970's. Violent crimes had become disproportionately high, based on the areas's share of the city's population.

Union Avenue was typical of many declining inner-city commercial areas throughout urban America. A major revitalization effort by the city of Portland that includes Crime Prevention Through Environmental Design has begun to turn around the area.

The prevalent corridor crimes are assault, robbery, purse-snatching, and burglary both commercial and residential. A number of steps to solve the corridor's crime problems have already begun. A Safe Streets for People project is providing outdoor lighting, dial-free emergency telephones and sidewalk and landscaping improvements. Also, part of Safe Streets are a block watch program and a program setting up certain homes as safe havens. Residents and frequenters of the corridor have participated in neighborhood clean-ups and Sunday markets.

In the spring of 1977, interviews with corridor business people found that more than half had increased sales in the last two years, and 90 percent of them had no intention of leaving in the near future (Nation's Cities, 1977). In the first 10 months there was a 29 percent reduction in commercial burglaries on Union Avenue, compared to a 9 percent reduction for the city as a whole. This reduction carried over into the first quarter of 1977, at which time a sharp decline, 61 percent (Nation's Cities, 1977).

Prior to the installation of a parking lot lighting system, the Fairmont Mall in Camillus New York was experiencing a high level of car break-ins (Bachner, 1986). The installation of a lighting system eliminated these break-ins, boosted mall patronage, and

allowed the scope and frequency of security patrols to be reduced.

Similarly, the installation of an effective lighting system at the parking lot in Spring Valley Park in San Diego, California, eliminated robberies, vandalism, and burglaries (Bachner, 1986). Vehicular accidents were also reduced. When the crime rate was high at the park children and the elderly avoided going to the park, but since crime has dropped they are playing and walking at the park at night.

In England, crime has been cut down drastically by video surveillance equipment. The use of the closed circuit television (CCTV) systems has cut down crime by 30 to 40 percent at local malls like Archway in North London and certain cities in England such as: Guilford and Merseyside.

The CCTVs are manned 24 hours a day by well trained individuals. They can immediately call the police who will arrest the criminal in the act or process of leaving the area. The surveillance operators turn over the video tape to the police, and the criminal goes to jail.

The Tallahassee Police Department adopted the concept of CPTED to reduce crime in their city. They thought it would be easier and cheaper to reduce crime. In 1992, the Tallahassee Police Department invested in long-range crime prevention and dedicated a full-time crime prevention specialist to serve as a member of Tallahassee/Leon County Planning Commission's Technical Coordination Committee. The committee reviews all buildings and site plans for countywide construction. The crime prevention officer's job

is to convince the other members on the committee that the benefits of applying CPTED concepts in the planning stage will save developers money in the long run and result in a safer environment.

Their first successful story began with a municipal golf course where juveniles were committing armed robberies on golfers. There was no access control to the golf course. Teenagers used the golf course as a shortcut to their homes after school. Golfers could not be seen by other golfers or golf course staff because of trees and underbrush on the back of the course and between the greens. The perimeter fence line had holes in several places, there was a thick wooded area between the back golf course and the perimeter fence line, limiting natural surveillance of the course.

The police department recommended, the golf course management clear underbrush, clear-cut some areas, repair the perimeter fence, and put up signs which stated “Golfers Only” (Starnes and Tucker, 1993). Shortly after making the recommendations the police arrested eight juveniles for the involvement the armed robberies (Starnes and Tucker, 1993). The robberies have stopped, and the golfers feel safer with the implementations.

Clark High School in Las Vegas has been troubled by violent crime, deteriorating buildings, and the lack of community sense.

Wayne Tanaka, the principal of Clark High School made a difference in 1993 with the help of Metro Police, local governments, business officials, and area residents, and

property owners to form the One Neighborhood for Everyone. This meant Clark High School was to become a village center to surrounding area. Metro police reported a 33.5 percent drop, from 1993 to 1994, in the area's crime rate due to the set up of the village center at Clark High School.

As the village center, Clark High School offers to surrounding community:

- Rooms and lighted parking for collaborative meetings and local support groups
- Grass fields for residents where there are no parks within the immediate area
- Basketball courts for bored kids
- A base for Metro's police bike patrol
- Job training for adults and teens

Police Calls for Service at the Boulevard Mall

Due to confidentiality requirements, the actual police reports for call were not available. Police calls for service for 1995 to 1997 were estimated from interviews from Burke Smith, head of mall security and security officers.

