
THE UNIVERSITY OF CALGARY

Community Safety Audits

by

Mayja Embleton

A MASTER'S DEGREE PROJECT SUBMITTED TO THE FACULTY OF
ENVIRONMENTAL DESIGN IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF MASTER'S OF ENVIRONMENTAL
DESIGN

CALGARY, ALBERTA

JUNE, 1996

© Mayja Embleton 1996



National Library
of Canada

Acquisitions and
Bibliographic Services Branch

395 Wellington Street
Ottawa, Ontario
K1A 0N4

Bibliothèque nationale
du Canada

Direction des acquisitions et
des services bibliographiques

395, rue Wellington
Ottawa (Ontario)
K1A 0N4

Your file Votre référence

Our file Notre référence

The author has granted an irrevocable non-exclusive licence allowing the National Library of Canada to reproduce, loan, distribute or sell copies of his/her thesis by any means and in any form or format, making this thesis available to interested persons.

L'auteur a accordé une licence irrévocable et non exclusive permettant à la Bibliothèque nationale du Canada de reproduire, prêter, distribuer ou vendre des copies de sa thèse de quelque manière et sous quelque forme que ce soit pour mettre des exemplaires de cette thèse à la disposition des personnes intéressées.

The author retains ownership of the copyright in his/her thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without his/her permission.

L'auteur conserve la propriété du droit d'auteur qui protège sa thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

ISBN 0-612-20317-4

Canada

Name Mayja Embleton

Dissertation Abstracts International is arranged by broad, general subject categories. Please select the one subject which most nearly describes the content of your dissertation. Enter the corresponding four-digit code in the spaces provided.

Urban and Regional Planning

SUBJECT TERM

0999

SUBJECT CODE

U·M·I

Subject Categories

THE HUMANITIES AND SOCIAL SCIENCES

COMMUNICATIONS AND THE ARTS

Architecture 0729
Art History 0377
Cinema 0900
Dance 0378
Fine Arts 0357
Information Science 0723
Journalism 0391
Library Science 0399
Mass Communications 0708
Music 0413
Speech Communication 0459
Theater 0465

EDUCATION

General 0515
Administration 0514
Adult and Continuing 0516
Agricultural 0517
Art 0273
Bilingual and Multicultural 0282
Business 0688
Community College 0275
Curriculum and Instruction 0727
Early Childhood 0518
Elementary 0524
Finance 0277
Guidance and Counseling 0519
Health 0680
Higher 0745
History of 0520
Home Economics 0278
Industrial 0521
Language and Literature 0279
Mathematics 0280
Music 0522
Philosophy of 0998
Physical 0523

Psychology 0525
Reading 0535
Religious 0527
Sciences 0714
Secondary 0533
Social Sciences 0534
Sociology of 0340
Special 0529
Teacher Training 0530
Technology 0710
Tests and Measurements 0288
Vocational 0747

LANGUAGE, LITERATURE AND LINGUISTICS

Language 0679
 General 0289
 Ancient 0290
 Linguistics 0291
 Modern 0291
Literature 0401
 General 0294
 Classical 0295
 Comparative 0297
 Medieval 0298
 Modern 0316
 African 0591
 American 0305
 Asian 0352
 Canadian (English) 0355
 Canadian (French) 0593
 English 0311
 Germanic 0312
 Latin American 0315
 Middle Eastern 0313
 Romance 0314
 Slavic and East European 0314

PHILOSOPHY, RELIGION AND THEOLOGY

Philosophy 0422
Religion 0318
 General 0321
 Biblical Studies 0319
 Clergy 0320
 History of 0322
 Philosophy of 0469
Theology 0469

SOCIAL SCIENCES

American Studies 0323
Anthropology 0324
 Archaeology 0326
 Cultural 0327
 Physical 0310
Business Administration 0272
 General 0770
 Accounting 0454
 Banking 0338
 Marketing 0385
Canadian Studies 0501
Economics 0503
 General 0505
 Agricultural 0508
 Commerce-Business 0509
 Finance 0510
 History 0511
 Labor 0358
 Theory 0366
Folklore 0351
Geography 0578
Gerontology 0578
History 0578
 General 0578

Ancient 0579
Medieval 0581
Modern 0582
Black 0328
African 0331
Asia, Australia and Oceania 0332
Canadian 0334
European 0335
Latin American 0336
Middle Eastern 0333
United States 0337
History of Science 0585
Law 0398
Political Science 0615
 General 0616
 International Law and Relations 0617
 Public Administration 0814
Recreation 0452
Social Work 0626
Sociology 0627
 General 0938
 Criminology and Penology 0631
 Demography 0628
 Ethnic and Racial Studies 0629
 Individual and Family Studies 0630
 Industrial and Labor Relations 0700
 Public and Social Welfare 0344
 Social Structure and Development 0709
 Theory and Methods 0453
Transportation 0999
Urban and Regional Planning 0453
Women's Studies 0453

THE SCIENCES AND ENGINEERING

BIOLOGICAL SCIENCES

Agriculture 0473
 General 0285
 Agronomy 0475
 Animal Culture and Nutrition 0476
 Animal Pathology 0359
 Food Science and Technology 0478
 Forestry and Wildlife 0479
 Plant Culture 0480
 Plant Pathology 0817
 Plant Physiology 0777
 Range Management 0746
Biology 0306
 General 0287
 Anatomy 0308
 Biostatistics 0309
 Botany 0379
 Cell 0329
 Ecology 0353
 Entomology 0369
 Genetics 0793
 Limnology 0410
 Microbiology 0307
 Molecular 0317
 Neuroscience 0416
 Oceanography 0433
 Physiology 0821
 Radiation 0778
 Veterinary Science 0472
Zoology 0786
Biophysics 0760
 General 0425
 Medical 0996

EARTH SCIENCES

Biogeochemistry 0425
Geochemistry 0996

Geodesy 0370
Geology 0372
Geophysics 0373
Hydrology 0388
Mineralogy 0411
Paleobotany 0345
Paleoecology 0426
Paleontology 0418
Paleozoology 0985
Palynology 0427
Physical Geography 0368
Physical Oceanography 0415

HEALTH AND ENVIRONMENTAL SCIENCES

Environmental Sciences 0768
Health Sciences 0566
 General 0300
 Audiology 0992
 Chemotherapy 0567
 Dentistry 0350
 Education 0769
 Hospital Management 0758
 Human Development 0982
 Immunology 0564
 Medicine and Surgery 0347
 Mental Health 0569
 Nursing 0570
 Nutrition 0380
 Obstetrics and Gynecology 0354
 Occupational Health and Therapy 0381
 Ophthalmology 0571
 Pathology 0419
 Pharmacology 0572
 Pharmacy 0382
 Physical Therapy 0573
 Public Health 0574
 Radiology 0575
 Recreation 0575

Speech Pathology 0460
Toxicology 0383
Home Economics 0386

PHYSICAL SCIENCES

Pure Sciences

Chemistry 0485
 General 0749
 Agricultural 0486
 Analytical 0487
 Biochemistry 0488
 Inorganic 0738
 Nuclear 0490
 Organic 0491
 Pharmaceutical 0494
 Physical 0495
 Polymer 0754
 Radiation 0405
Mathematics 0605
Physics 0986
 General 0606
 Acoustics 0608
 Astronomy and Astrophysics 0748
 Atmospheric Science 0607
 Atomic 0798
 Electronics and Electricity 0759
 Elementary Particles and High Energy 0609
 Fluid and Plasma 0610
 Molecular 0752
 Nuclear 0756
 Optics 0611
 Radiation 0463
 Solid State 0346
Statistics 0984

Applied Sciences

Applied Mechanics 0346
Computer Science 0984

Engineering 0537
 General 0538
 Aerospace 0539
 Agricultural 0540
 Automotive 0541
 Biomedical 0542
 Chemical 0543
 Civil 0544
 Electronics and Electrical 0348
 Heat and Thermodynamics 0545
 Hydraulic 0546
 Industrial 0547
 Marine 0794
 Materials Science 0548
 Mechanical 0743
 Metallurgy 0551
 Mining 0552
 Nuclear 0549
 Packaging 0765
 Petroleum 0554
 Sanitary and Municipal 0790
 System Science 0428
Geotechnology 0796
Operations Research 0795
Plastics Technology 0994
Textile Technology 0994

PSYCHOLOGY

General 0621
Behavioral 0384
Clinical 0622
Developmental 0620
Experimental 0623
Industrial 0624
Personality 0625
Physiological 0989
Psychobiology 0349
Psychometrics 0632
Social 0451



Nom _____

Dissertation Abstracts International est organisé en catégories de sujets. Veuillez s.v.p. choisir le sujet qui décrit le mieux votre thèse et inscrire le code numérique approprié dans l'espace réservé ci-dessous.

SUJET

--	--	--	--

CODE DE SUJET

U·M·I

Catégories par sujets

HUMANITÉS ET SCIENCES SOCIALES

COMMUNICATIONS ET LES ARTS

Architecture	0729
Beaux-arts	0357
Bibliothéconomie	0399
Cinéma	0900
Communication verbale	0459
Communications	0708
Danse	0378
Histoire de l'art	0377
Journalisme	0391
Musique	0413
Sciences de l'information	0723
Théâtre	0465

ÉDUCATION

Généralités	515
Administration	0514
Art	0273
Collèges communautaires	0275
Commerce	0688
Economie domestique	0278
Éducation permanente	0516
Éducation préscolaire	0518
Éducation sanitaire	0680
Enseignement agricole	0517
Enseignement bilingue et multiculturel	0282
Enseignement industriel	0521
Enseignement primaire	0524
Enseignement professionnel	0747
Enseignement religieux	0527
Enseignement secondaire	0533
Enseignement spécial	0529
Enseignement supérieur	0745
Évaluation	0288
Finances	0277
Formation des enseignants	0530
Histoire de l'éducation	0520
Langues et littérature	0279

Lecture	0535
Mathématiques	0280
Musique	0522
Orientalisme et consultation	0519
Philosophie de l'éducation	0998
Physique	0523
Programmes d'études et enseignement	0727
Psychologie	0525
Sciences	0714
Sciences sociales	0534
Sociologie de l'éducation	0340
Technologie	0710

LANGUE, LITTÉRATURE ET LINGUISTIQUE

Langues	
Généralités	0679
Anciennes	0289
Linguistique	0290
Modernes	0291
Littérature	
Généralités	0401
Anciennes	0294
Comparée	0295
Médiévale	0297
Moderne	0298
Africaine	0316
Américaine	0591
Anglaise	0593
Asiatique	0305
Canadienne (Anglaise)	0352
Canadienne (Française)	0355
Germanique	0311
Latino-américaine	0312
Moyen-orientale	0315
Romane	0313
Slave et est-européenne	0314

PHILOSOPHIE, RELIGION ET THÉOLOGIE

Philosophie	0422
Religion	
Généralités	0318
Clergé	0319
Études bibliques	0321
Histoire des religions	0320
Philosophie de la religion	0322
Théologie	0469

SCIENCES SOCIALES

Anthropologie	
Archéologie	0324
Culturelle	0326
Physique	0327
Droit	0398
Économie	
Généralités	0501
Commerce-Affaires	0505
Économie agricole	0503
Économie du travail	0510
Finances	0508
Histoire	0509
Théorie	0511
Études américaines	0323
Études canadiennes	0385
Études féministes	0453
Folklore	0358
Géographie	0366
Gérontologie	0351
Gestion des affaires	
Généralités	0310
Administration	0454
Banques	0770
Comptabilité	0272
Marketing	0338
Histoire	
Histoire générale	0578

Ancienne	0579
Médiévale	0581
Moderne	0582
Histoire des noirs	0328
Africaine	0331
Canadienne	0334
États-Unis	0337
Européenne	0335
Moyen-orientale	0333
Latino-américaine	0336
Aste, Australie et Océanie	0332
Histoire des sciences	0585
Loisirs	0814
Planification urbaine et régionale	0999
Science politique	
Généralités	0615
Administration publique	0617
Droit et relations internationales	0616
Sociologie	
Généralités	0626
Aide et bien-être social	0630
Criminologie et établissements pénitentiaires	0627
Démographie	0938
Études de l'individu et de la famille	0628
Études des relations interethniques et des relations raciales	0631
Structure et développement social	0700
Théorie et méthodes	0344
Travail et relations industrielles	0629
Transports	0709
Travail social	0452

SCIENCES ET INGÉNIERIE

SCIENCES BIOLOGIQUES

Agriculture	
Généralités	0473
Agronomie	0285
Alimentation et technologie alimentaire	0359
Culture	0479
Élevage et alimentation	0475
Exploitation des pâturages	0777
Pathologie animale	0476
Pathologie végétale	0480
Physiologie végétale	0817
Sylviculture et faune	0478
Technologie du bois	0746
Biologie	
Généralités	0306
Anatomie	0287
Biologie (Statistiques)	0308
Biologie moléculaire	0307
Botanique	0309
Cellule	0379
Écologie	0329
Entomologie	0353
Généétique	0369
Limnologie	0793
Microbiologie	0410
Neurologie	0317
Océanographie	0416
Physiologie	0433
Radiation	0821
Science vétérinaire	0778
Zoologie	0472
Biophysique	
Généralités	0786
Médicale	0760

SCIENCES DE LA TERRE

Biogéochimie	0425
Géochimie	0996
Géodésie	0370
Géographie physique	0368

Géologie	0372
Géophysique	0373
Hydrologie	0388
Minéralogie	0411
Océanographie physique	0415
Paléobotanique	0345
Paléocéologie	0426
Paléontologie	0418
Paléozoologie	0985
Palynologie	0427

SCIENCES DE LA SANTÉ ET DE L'ENVIRONNEMENT

Économie domestique	0386
Sciences de l'environnement	0768
Sciences de la santé	
Généralités	0566
Administration des hôpitaux	0769
Alimentation et nutrition	0570
Audiologie	0300
Chimiothérapie	0992
Dentisterie	0567
Développement humain	0758
Enseignement	0350
Immunologie	0982
Loisirs	0575
Médecine du travail et thérapie	0354
Médecine et chirurgie	0564
Obstétrique et gynécologie	0380
Ophtalmologie	0381
Orthophonie	0460
Pathologie	0571
Pharmacie	0572
Pharmacologie	0419
Physiothérapie	0382
Radiologie	0574
Santé mentale	0347
Santé publique	0573
Soins infirmiers	0569
Toxicologie	0383

SCIENCES PHYSIQUES

Sciences Pures	
Chimie	
Généralités	0485
Biochimie	487
Chimie agricole	0749
Chimie analytique	0486
Chimie minérale	0488
Chimie nucléaire	0738
Chimie organique	0490
Chimie pharmaceutique	0491
Physique	0494
Polymères	0495
Radiation	0754
Mathématiques	0405
Physique	
Généralités	0605
Acoustique	0986
Astronomie et astrophysique	0606
Électronique et électricité	0607
Fluides et plasma	0759
Météorologie	0608
Optique	0752
Particules (Physique nucléaire)	0798
Physique atomique	0748
Physique de l'état solide	0611
Physique moléculaire	0609
Physique nucléaire	0610
Radiation	0756
Statistiques	0463

Sciences Appliquées Et Technologie

Informatique	0984
Ingénierie	
Généralités	0537
Agricole	0539
Automobile	0540

Biomédicale	0541
Chaleur et thermodynamique	0348
Conditionnement (Emballage)	0549
Génie aérospatial	0538
Génie chimique	0542
Génie civil	0543
Génie électronique et électrique	0544
Génie industriel	0546
Génie mécanique	0548
Génie nucléaire	0552
Ingénierie des systèmes	0790
Mécanique navale	0547
Métallurgie	0743
Science des matériaux	0794
Technique du pétrole	0765
Technique minière	0551
Techniques sanitaires et municipales	0554
Technologie hydraulique	0545
Mécanique appliquée	0346
Géotechnologie	0428
Matériaux plastiques (Technologie)	0795
Recherche opérationnelle	0796
Textiles et tissus (Technologie)	0794

PSYCHOLOGIE

Généralités	0621
Personnalité	0625
Psychobiologie	0349
Psychologie clinique	0622
Psychologie du comportement	0384
Psychologie du développement	0620
Psychologie expérimentale	0623
Psychologie industrielle	0624
Psychologie physiologique	0989
Psychologie sociale	0451
Psychométrie	0632

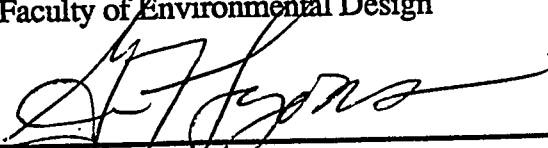


THE UNIVERSITY OF CALGARY
FACULTY OF ENVIRONMENTAL DESIGN

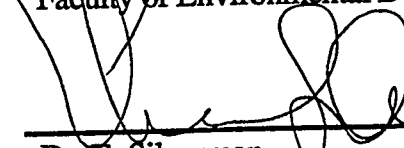
The undersigned certify that they have read and recommend to the Faculty of Environmental Design for acceptance, A Master's Degree Project entitled Community Safety Audits submitted by Mayja Embleton in partial fulfillment of the requirements for the degree of Master of Environmental Design.



Dr. Walter Jamieson (co-supervisor)
Faculty of Environmental Design



Glenn Lyons (co-supervisor)
Faculty of Environmental Design



Dr. E. Silverman
General Studies



Dr. Ron Wardell
Faculty of Environmental Design

Abstract

Safety audits are a community development tool that use the concept of crime prevention through environmental design to assess the real and perceived safety of specific areas within communities. Safety audits were started by a group named METRAC, who were concerned about attacks against women in a Toronto park. Over the last six years, the popularity of safety audits has grown and they are now becoming institutionalized by municipalities with an interest in promoting safety in their cities. As with other new ideas, the process is facing growing pains. This project examines two case studies of communities in Calgary which have conducted safety audits. It then examines how well the safety audit process in Calgary works and makes recommendations to improve the existing process. Recommendations include: improvements to the safety audit handbooks or guides, improvements to the safety audit checklist, minimum standards for final reports, establishing criteria for prioritizing recommendations both with and among communities and establishing a municipal committee responsible for reviewing safety audit recommendations.

Key Words: Safety Audit, CPTED, crime prevention, real and perceived safety, community development

Acknowledgments

There are numerous people whom I need to thank for their help and support during this project. I would like to thank Glenn Lyons, my supervisor whose guidance was most appreciated. Thanks also to Walter Jamieson and Elly Silverman, for participating on my Master's Degree Project committee.

I would like to extend my thanks to the communities of Millrise and Wildwood and to the residents of those committees who made themselves available to me for interviews. Your comments have been most welcome. In particular I would like to acknowledge Colleen Miller and Kathee Habinjanic, who patiently answered all of my questions. I would also like to thank Phil Levson and the Action Committee Against Violence for allowing me the opportunity to conduct audits in Calgary.

I would like to thank my family and friends: Mom, Dad, Alistair, Jamie, Bonnie, Ed and Leo.

Table of Contents

Introduction	1
Chapter One: Crime Prevention Through Environmental Design	17
Chapter Two: Safety Audits	23
Overview of Chapters Three and Four	30
Chapter Three: Case Study: Millrise	32
Chapter Four: Case Study: Wildwood	46
Chapter Five: Improvements and Recommendations	59
Conclusions	89
Appendix A: Questionnaire	94
Appendix B: Typical Design Problems	106
References	113

List of Figures

Figure 1	Perception of Crime Among Adult Respondents in Calgary	5
Figure 2	Safety Ratings While Engaged in Various Activities in Calgary	7
Figure 3	Map of Calgary Showing Placement of Millrise	33
Figure 4	Selected Millrise Crime Statistics	35
Figure 5	Summary of Millrise Recommendations	41
Figure 6	Map of Calgary Showing Placement of Wildwood	47
Figure 7	Selected Crime Statistics for Wildwood	49
Figure 8	Summary of Recommendations for Wildwood	51
Figure 9	CPTED Matrix	71

Introduction

The purpose of this Master's Degree Project is to examine the concept of crime prevention through environmental design, specifically as it is used in safety audits and to determine the validity and usefulness of audits as a means of reducing safety risks and developing community. Crime prevention through environmental design has very old roots. Human settlements have used its principles from the very beginning. Planners and builders of the twentieth century, however, seem to have lost sight of basic crime prevention techniques, such as the use of surveillance, for the prevention of crime.

Society has increasingly come to rely on police services, locks, gates and other target hardening devices to protect themselves from the threat of crime. Accordingly, communities and buildings have been built that rely on these formal or mechanistic approaches to limit crime. Fear of crime and reliance on mechanical means of protection have resulted in the creation of growing numbers of gated communities across North America. According to a documentary aired December 6, 1995 on *The National*, gated communities often have many amenities, such as lakes or golf courses and are watched by security guards. Critics of gated communities insist that they create a fantasy world that is not truly free of crime. In fact, the perception of 'haves' versus 'have nots' may increase the risk of gated community residents to theft.

Poorly designed communities and housing projects in the United States drew the attention of planners and architects such as Jane Jacobs and Oscar Newman. They identified problems with the design and layout of individual buildings and communities. The identification of problems led to a renewed interest in the ability of the physical design of an area to affect the behaviour of the people within it and suggestions on how to encourage appropriate types of behaviour. These concepts rely heavily on environmental determinism; that is, how a person behaves is affected by the environment he or she is in. Detractors of environmental determinism suggest that there are factors other than the environment that affect behaviour. These factors include: education, poverty, victimization, population density, changing societal values, the criminal justice system and the correction system. But crime is not a simple matter and all of these factors no doubt play a role.

This project focuses on the design of physical space because, “studies of crime have shown that some types of location seem more conducive to criminal activity than others, a fact recognized by those having practical day-to day contact with criminal activities” (Stanley 1976). Other studies have shown that five environmental factors are usually present when a crime takes place (Wisner, Christensen and Zebarth 1992). These factors are: Predictability of time and path, an ambush site, an attack site (enclosed on three sides) a least two escape routes for the offender and offender not likely to be identifiable at 24 meters. Removing just one of these factors may be all that is needed to prevent an attack. Safety audits and CPTED are designed to identify these environmental factors and, if possible, eliminate them.

Safety audits are a relatively new concept in Canada. They began in Toronto in the late eighties. Since then they have become a popular trend. More and more communities and organizations, such as city transit authorities, are using safety audits as a means of evaluating and improving physical space. Safety audits are in the process of evolution, as they move from an independent activity to one that is becoming institutionalized by city planning departments and municipal governments.

City Planning departments, safe city organizations and other agencies are using safety audits as a community development tool, because audits can be used to bring together a diverse cross section of community volunteers. These volunteers work together to solve problems affecting the entire community. People interested in community development will find an audit can bring many benefits to a community, including decreasing real and perceived crime risks, getting community residents to work together and acting as a catalyst for community change. In many instances, an audit will help identify who the community activists in the neighbourhood are. Because community activists are often motivated by the desire to help, by a sense of reward from completing a job and by being visible (Warren and Warren, 1977), the task oriented nature of safety audits are a perfect vehicle for an activist to reveal their talents.

Safety audits can also be used as a way to create partnerships or bridges with other organizations in the community (Kretzmann, 1993). Organizations such as the police, schools, churches and businesses should be included in the safety audit process. This

participation may assist the community in creating lasting bonds with these different community players. These new relationships may lead to the creation of new and innovative programs and partnerships between the community and other organizations.

Safety and Perceptions of Personal Safety

In order to decide whether or not crime prevention through environmental design (CPTED) and safety audits are appropriate as crime prevention techniques, it must be determined whether or not there is a need for this type of service, by investigating the actual and perceived safety needs of a community. This is not necessarily an easy task. Crime statistics are recorded in a variety of ways, by a number of different agencies. Crime statistics are often difficult to compare, as each police jurisdiction may choose their own categories for types of crime or boundaries for data collection may make comparisons difficult. The perception of crime plays an important role in the understanding of crime. For example, if violent crime rates are increased, but other forms of crime are decreased, the public will perceive that, on the whole, criminal activity has increased.

In order to better understand the problem of the perception of crime, the Calgary Police Service conducted *A Study of the Level and Nature of Youth Crime in Calgary*. This study included data collection on a number of different factors surrounding youth crime, including community crime and victimization of adults. One of the objectives of the

study was to examine the perceptions of crime and personal violence among adult respondents in the Calgary community (See figure 1).

Figure 1
Perceptions of Adult Respondents Concerning Aspects of Crime in Their Communities

Aspect of Crime	N	%
Comparison of Crime in Community to Other Areas in Calgary		
Higher	72	12.8
About the Same	181	32.1
Lower	284	50.1
Don't Know	27	4.8
Total	564	100.0
Change in Crime Within Community in Past Five Years		
Increased	277	49.1
About the Same	222	39.4
Decreased	21	3.7
Don't Know	44	7.8
Total	564	100.0
Are There Any Major Crime Problems in Community?		
Yes	195	34.6
No	347	61.5
Don't Know	22	3.9
Total	564	100.0
Is There a Youth Crime and Violence Problem in Community?		
Yes	250	44.3
No	282	50.0
Don't Know	32	5.7
Total	564	100.0

Source: *A Study of the Level and Nature of Youth Crime and Violence in Calgary*, 1995. The Calgary Police Service

Most of the respondents felt that crime in their community had stayed about the same over the past year, 10.1% indicated that their community had become better and 17.9% stated that crime in their community had worsened. Almost one half of the respondents (49.1%) thought that crime had increased within the last five years, 39.4% thought that

crime had stayed about the same and, accordingly, 3.7% felt that crime had decreased. Interestingly, males were more likely (35.1%) to state that crime in their community was higher than in other communities and women were more likely to believe (27.5%) that the crime levels in their community was comparable to other communities. People who had never been married were more likely to perceive their neighbourhoods as having more crime than people who were married or living with someone (21.2% to 11.7%).

This study also asked respondents to indicate how safe they felt, on a scale ranging from very safe to very unsafe, while engaging in some common activities (See figure 2). Most of the respondents (68.7%) reported that they felt safe or somewhat safe walking alone at night in their communities, but 31.3% indicated that they felt somewhat or very unsafe at this activity. Using public transportation caused 47.6% of the adult respondents to feel unsafe and almost all respondents (94%) felt safe in their own homes at night. Women and elderly people were more likely than men or younger people to feel afraid of doing any of these activities.

These numbers are interesting for several reasons. They show that almost one half of the respondents felt that crime was increasing. This indicates that there is a definite need to investigate this trend and, if possible, try to alleviate fears. When examining the figures related to activities that a community member may engage in, such as walking in the neighbourhood or waiting for a bus, it can be seen that between 31% and 47% of the population experience some apprehension during these activities. This type of uneasiness can lead to citizens not utilizing their community in an active and productive manner.

Figure 2

Ratings of Adult Respondents of Their Feelings of Safety While Walking Alone In Their Communities After Dark, Waiting For Or Using Public Transportation After Dark And When Alone In Their Homes At Night¹

Feeling of Safety	Type of Activity		
	Walking Alone ²	Using Public Transportation ³	Home Alone
	%	%	%
Very Unsafe	17.1	28.5	1.2
Somewhat Unsafe	14.2	19.1	4.8
Somewhat Safe	30.7	26.1	20.6
Very Safe	38.0	26.3	73.4
Total	100.0	100.0	100.0

1 Source of Data: Community Survey; Total N=564

2 Missing Observations: 27

3 Missing Observations: 97

Source: *A Study of the Level and Nature of Youth Crime and Violence in Calgary*, The Calgary Police Service.

The Calgary Downtown Business Revitalization Zone Association published a report identifying actual and perceived levels of criminal activity in the downtown core. The study indicated that people's perception of risk "demonstrated a higher level of concern for public safety when compared to actual levels of criminal activity" (1992). The study revealed that 64% of the survey respondents stated that they were either very or somewhat concerned about their personal safety while downtown. More notably, this 64% consisted of very specific groups of people, such as female respondents, people with an annual salary less than \$15,000 and people who were over 45 years of age.

These studies, and many others, illustrate how perceptions of risk are related to a person's status and place within society (Moore and Trojanowicz 1988 and Sacco 1995). Fear and concerns about personal safety affect certain segments of the population more than others.

Women, people with disabilities, the elderly and minorities often feel unsafe even within their own communities (Keane 1992). This fear affects their lives. It prevents them from participating in activities and keeps them house-bound. One study indicates that one in ten Canadians tend to stay in their homes after dark, because of crime or the fear of crime (Stewart 1995). It is important to try to understand how these perceptions of risk develop when actual crime statistics do not seem to indicate a need to panic. In fact, an Angus Reid poll conducted for the Calgary Herald indicates that although the fear of becoming a victim has risen from 52% to 62% in the last five years, Statistics Canada has reported a 29% drop in property crimes and a 28% drop in personal crime, in Calgary since 1992 (Zurowski and Jaremko, 1996).

It is also important to remember that, “reasonable fears, channeled in constructive directions, prepare society to deal with crime [but that] Individual responses to fear aggregate in a way that erodes the overall quality of community life and, paradoxically, the capacity of society to deal with crime” (Moore and Trojanowicz 1988).

Media may have to take some of the responsibility for creating an irrational fear of crime. Every day television and radio bring horror stories into our homes. One criminologist, Paul Sonnichsen, believes that, “people are losing their ability to distinguish between real and perceived threats to their safety” (Small 1992). The overemphasis of violent acts by the media has made the threat of violence seem more tangible to the general public.

Another factor in the increasing fear of crime is changing demographics. As people age and their faculties become frail, they become more attuned to potential threats to their personal safety. The Canadian population is aging and as a result, there will be a corresponding increase in perceived threats to safety. To exacerbate this situation, there is a baby boom “echo” of young adults, who are traditionally responsible for the greatest number of crimes in a society (Small 1992).

Understanding the factors that contribute to a person’s feelings of risk is imperative if society is going to be able to combat this fear. It is important that people are taught about the actual risks to their safety and that they become empowered to take control of their environments so that they do not feel threatened by being active in their cities and communities. Safety audits, based on principles of crime prevention through environmental design, have been developed to allow people, especially those who are marginalized, to examine their physical environments and suggest changes that will make them feel less threatened and more secure. As people become more secure in their neighbourhoods they may become more active members of the community and thereby experience an increase in their quality of life.

Organization of this Project

This master’s degree project is divided into five chapters. Chapters One and Two explain the concepts of crime prevention through environmental design and safety audits.

The middle section of this document focuses on two case studies. These are both Calgary communities which have conducted safety audits. The communities are described, as is the process that was used to conduct the audits. The recommendations that were made are examined to see whether or not any of them were implemented. The relative success or failure of these audits is assessed.

Chapter Five is an analysis of the advantages, disadvantages and effectiveness of the safety audit process. The examination of the case studies and other local safety audits, provide information to create improvements to the audit process. Recommendations will be made on how the safety audit process can be improved in Calgary. These recommendations will cover the steps leading up to a safety audit, the implementation of recommendations coming from safety audits and steps that the city can take to ensure that their safety audit program is successful.

Method of Study

The first step for this Master's Degree Project was the collection of relevant information and data for the project. This consisted of research into the history and theory of crime prevention through environmental design and the history and theory of safety audits. The purpose of this research was to gain an understanding of these concepts, both theoretically and practically. This research effectively began in the Winter of 1994 when

I participated in a Faculty of Environmental Design course taught by Professor Theresa Baxter. During this course a classmate, Graeme Fuller, and I researched safety audits and then conducted an audit ourselves. This research continued after I was hired on contract by The Action Committee Against Violence to coordinate community safety audits throughout the City of Calgary.

Data collection for the two community case studies was accomplished in the following ways. During the Faculty of Environmental Design course, an audit was conducted in the community of Millrise. As part of this audit, Fuller and I collected information about the community, such as its demographic profile and its crime statistics. This provided many of the details for the first case study. Details about what happened after we finished the audit were provided by various members of the community association, Block Watch and audit participants in interviews as part of the subsequent research for this project.

Data regarding the second case study community, Wildwood, was obtained through personal involvement with the community and its audit, interviews with people associated with the safety audits held in that community and through documents such as press releases, minutes from the Urban Safety Work Group and newspaper articles.

The next step of the methodology was an evaluation of the processes used in each of the two case studies. Factors that were used to judge the effectiveness of the audit were the success of implementing recommendations of the audit, participation rates and satisfaction levels of participants.

The final phase of the methodology was the drawing of conclusions based on the research and analysis undertaken in the previous steps. Recommendations have been made on how the process of safety audits can be improved and how municipalities can be involved in an effective strategy of implementing recommendations that flow from safety audits.

Literature Review

The purpose of this literature review is to give the reader a sense of the scope of literature that is available on this topic and to trace a brief history of how the discipline has advanced in the preceding two decades. Literature pertaining to crime prevention through environmental design can be traced back to the 1960s. Jane Jacobs, author of *The Death and Life of Great American Cities* (1961) was one of the first individuals who recognized that certain urban forms appeared to be safer, and better used, than other forms. Jacobs advocated for mixed use of facilities, in an attempt to diversify areas and create a continuous flow of people traffic thereby increasing natural surveillance and the ability of communities to police themselves. Jacobs also encouraged the use of short blocks and a clear delineation between public, semi-public and private spaces. Oscar Newman, who focused primarily on public housing complexes, also insisted on the use of mixed facilities, natural surveillance and definable territorial spaces, which limit the types of permissible activities and create a sense of ownership and authority. Newman published

a variety of texts exhorting his view point, including *Defensible Space* (1971) and *Guidelines for Creating Defensible Space* (1976).

The concepts of crime prevention through environmental design have become more sophisticated since the 1970s. Environmental security attempts to increase the “omniscience” or surveillance, of an area by making the criminal feel that he is more likely to get caught. It is recognized that mere physical design is not enough and it is acknowledged that good design must be combined with appropriate target hardening (locks and gates), potential target identification, site inspection, education of residents and various community policing initiatives. Timothy Crowe, an American criminologist, is considered one of the foremost experts in the field of crime prevention through environmental design. He has published numerous articles, training guides and textbooks outlining and explaining the concepts he has worked on, such as *Crime Prevention Through Environmental Design: Applications of Architectural Design and Space Management Concepts* (1991) and *Crime Prevention Through Environmental Design: Malls and Shopping Centers* (undated).

Not everyone is as enthusiastic about environmental design as a crime prevention technique. Crime prevention through environmental design works on the premise that criminals will be less likely to commit a crime if they feel they are being watched. However, it is “...not known to what extent the apprehension strategy deters crime. Since, for example, only a small percentage of burglars are arrested” (O’Block et al, 1991). In “The Other Side of CPTED”, Randall Atlas (1991) explains that criminals can

also use the same principles to make themselves safer. For example, crack houses are positioned so that lookouts can give advanced warning to inhabitants in case of a police raid. Atlas argues that in order for environmental changes to have any noticeable effect, they must first have the cooperation and participation of residents, owners and property managers as well as access to substantial financial resources. Atlas states that defensible space techniques have not been successfully implemented in most low income public housing schemes and, in fact, crime and drug rates are higher than ever, due to a lack of resources and commitment. This author, however, gives no indication of how many public housing developments have actively tried to incorporate CPTED principles in their designs.

Others point out that changing the physical design of an area is not enough and they are correct. Principles of crime prevention through environmental design are most effective when combined with appropriate programs such as Block Watch, Citizens Watch and other community-based policing initiatives. It is difficult to measure the effects a safety audit may have on a neighbourhood. Crime statistics from before and after the audit can be used as one measuring tool. However, it is difficult to quantify crimes that do not occur because of a change in the environment and those that do not occur because of other factors.

The literature regarding safety audits is generally confined to the process of conducting an audit and the results of these audits, rather than critical analyses of the process. This project hopes to add to the critical knowledge of the safety audit process. The Metro

Action Committee on Public Violence Against Women and Children (METRAC) in Toronto created the first safety audit in reaction to a series of violent attacks against women in one of Toronto's urban parks. The METRAC guide, which consists of instructions on how to conduct an audit and an accompanying checklist of what to look for, has been used as the model for safety audits across Canada. Municipalities which have chosen to follow METRAC's model, such as Edmonton, Calgary, Winnipeg and Vancouver.

Special interest groups that have completed either CPTED evaluations or safety audits have published accounts of their findings and recommendations. For example, transit systems, such as the Toronto Transit Commission, have conducted safety audits and made the results public. Many of these audits, such as one conducted for Women Looking Forward on the public transportation system in Calgary (1995), focus on safety for women, children, the disabled and the elderly, using METRAC's assumption that if an area is safe for these groups, it will be safer for everyone. Some schools have also published their findings, such as *A Crime Prevention through Environmental Design Study of the Turner-Fenton Secondary School* in Ontario.

Chapter One: Crime Prevention Through Environmental Design

Crime prevention through environmental design (CPTED) is defined by the National Crime Prevention Institute in Louisville, Kentucky, as “the proper *design* and effective *use* of the built environment [which] can lead to a reduction in the fear and incidence of crime and an improvement in the quality of life” (Crowe 1988). Advocates and instructors of CPTED, such as Timothy Crowe, herald CPTED as one of the most important methods of crime prevention. They are quick to point out that it is emerging “worldwide as one of the most promising and currently effective approaches to reducing opportunities for crime” (Crowe and Zahm 1994). They are also quick to point out that human civilizations have been intuitively using the principles upon which CPTED is founded for centuries. One of Crowe’s favourite examples is that of North American cliff dwellers who lived in practically impregnable caves on the faces of cliff, accessible only by ladders and easily sealed off against unwanted guests. It is simple to find other examples, from the castles and fortresses built on steep hills or surrounded by moats, to the carefully designed military boulevards of the Ancient Romans.

Crime prevention through environmental design, as we know it today, has evolved from concepts presented by Oscar Newman in a book titled *Defensible Space* (1972). Newman is an architect who suggested that territoriality and surveillance of space could be

improved, thereby reducing opportunities for criminal activity. Much of Newman's work has created the foundations upon which CPTED has been developed. In 1971, C.R. Jeffery wrote a book called *Crime Prevention Through Environmental Design*, which encouraged law enforcers to look at the whole environment surrounding criminals and criminal activity, to see what factors influence the offender's behaviour. Jeffery acknowledged that Jane Jacobs' book, *The Death and Life of Great American Cities* (1961), has greatly contributed to the understanding of how people relate to land use and their environment.

Crime prevention through environmental design is based upon three overlapping strategies: natural access control, natural surveillance and territorial reinforcement. These are further refined by three types of crime prevention classifications: organized, mechanical and natural. These concepts will be explained in greater detail.

Crime prevention through environmental design as a way of approaching urban design does not conflict with other design philosophies, such as the "new fangled old towns" of Andres Duany and Elizabeth Plater-Zyberk or the high density communities of Peter Calthorpe. Instead, CPTED can be used to enhance and inform traditional or contemporary urban design philosophies. Inherent in the definition of CPTED is the operational concept that proper design and effective use of the built environment can reduce crime and fear of crime. This in turn will lead to a better quality of life. The concept of crime prevention through environmental design does not preclude an aesthetic environment, in fact, it encourages high quality design, no matter what underlying urban

design principle is used. There is no intrinsic bias towards certain population densities or general neighbourhood layout, although there are specific recommendations for certain design features.

CPTED Principles and Strategies

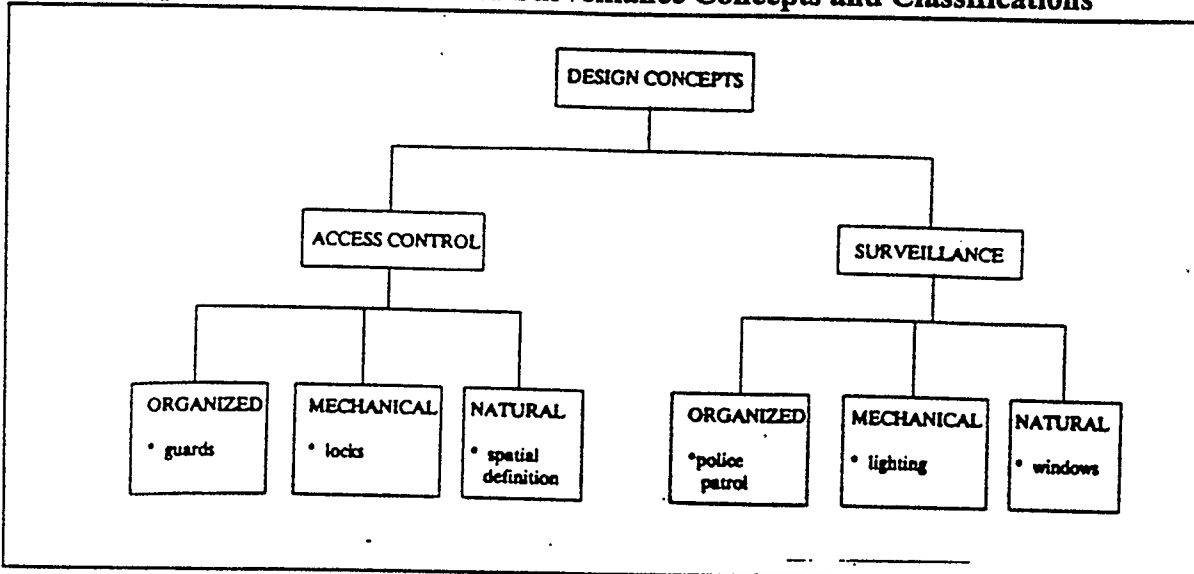
As mentioned above, crime prevention through environmental design is based upon three overlapping strategies, sometimes called design concepts, in the literature. These are: access control, surveillance and territorial reinforcement. Each one of these strategies or design concepts are further refined by three types of crime prevention classifications. These are: organized, mechanical and natural.

Access control is a strategy aimed at decreasing the opportunity for criminal activity by denying access to the crime target and by creating a feeling of risk to the perpetrator. An example of *organized access control* is the use of guards or patrols, *mechanical access control* would employ locks or barriers and *natural access control* uses spatial definition as a means of limiting access.

Surveillance is a design concept that attempts to keep offenders, or potential offenders, under observation. Once again, *organized surveillance* could be the use of patrol officers, *mechanical surveillance* would be the effective use of lights and *natural surveillance*

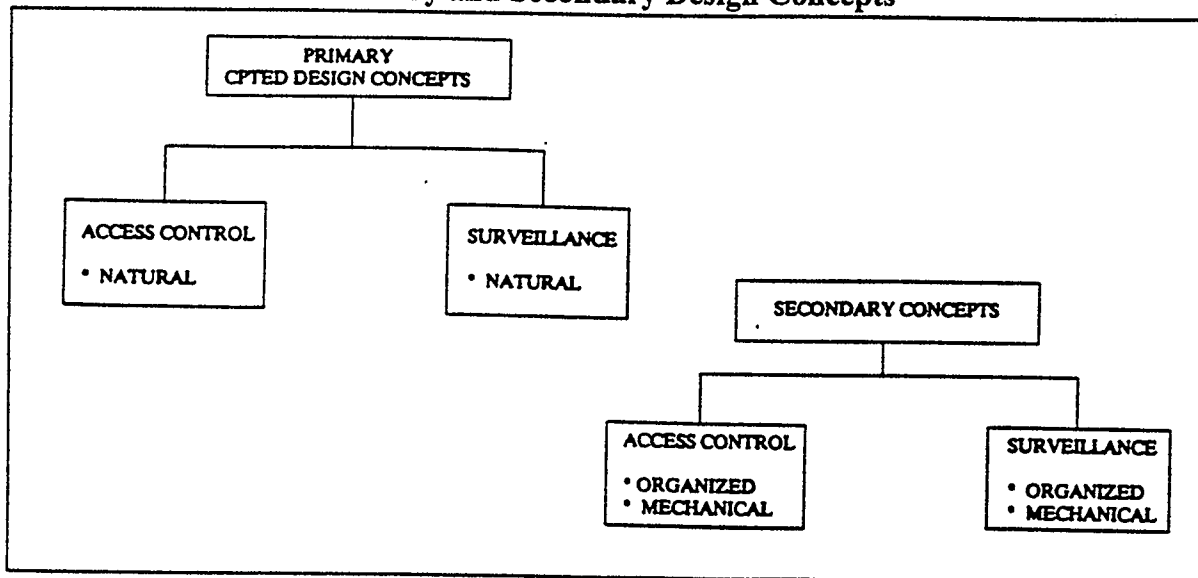
would be the ability for regular uses to overlook the area, perhaps through windows. The relationships of these concepts are illustrated.

Typical Access Control and Surveillance Concepts and Classifications



(from Crowe 1991)

Primary and Secondary Design Concepts



(from Crowe 1991)

In both of these categories, access control and surveillance, there has been a growing trend away from the organized and mechanical strategies towards more natural design techniques. As a result, the concept of territoriality has developed. Territoriality is the sphere of influence that a design creates, that makes the regular users feel responsibility for protecting that area and makes offenders know they are trespassing which increases the offender's feeling of risk. Natural access control and natural surveillance are integral to creating a feeling of territoriality. CPTED is characterized by a shift from the target-hardening approaches of traditional law enforcement (by creating artificial barriers, locks and alarms) to a more organic and natural approach to crime prevention that places a great deal of emphasis on the citizen's responsibility for looking out for and reporting, criminal activity in his or her community.

In *Crime Prevention Through Environmental Design: A Basic Training Manual*, Crowe explains the "Three-D" approach to space assessment. This approach is intended to be understandable to average persons, so that they can determine whether their space is designed and used appropriately. Crowe outlines the Three-D's, or dimensions, as:

- All human space has some **designated** purpose.
- All human space has social, cultural, legal or physical **definitions** that prescribe the desired and acceptable behaviours.
- All human space is **designed** to support and control the desired behaviours.

These Three-D's allow a user of a place to ask questions like: How well does this space support its intended use? Is there conflict between normal and abnormal users? How is

the space defined and is it clear who owns it? How does the design support or hinder the intended function? Answers to these questions can act as a way of guiding decisions about what to do with space to ensure that the normal users feel comfortable with it and the abnormal users feel uncomfortable.

CPTED In Practice

The growing confidence in crime prevention through environmental design principles is borne out by the increasing number of people that are making an effort to become informed about it. The Calgary Police Service has a constable devoted to CPTED. The Calgary Transit Authority has sent representatives to CPTED workshops so that they can become better informed about how to improve existing bus and light rail transit stops and how to make sure that future stops are better designed. Members of the Planning and Building Department of the City of Calgary are also being trained in environmental security. Some members of the Planning Department of the City of Calgary are attempting to implement a process by which all new public designs will be scrutinized by a CPTED panel, to prevent unsafe designs before they get built. And in Louisville, Kentucky, as in a growing number of American cities, the municipal government has passed a by-law insisting that new plans go through a CPTED evaluation process prior to permission for building.

Crime prevention through environmental design has proven to be an effective way of finding solutions for many problems, as evidenced in the examples above. It puts

concrete terms and labels to what has previously been done, but not labeled. CPTED allows an analysis of environments at different levels, from entire communities, to campuses or individual buildings. Once CPTED has been applied to an area, long and short term goals can be created to make that area safer. CPTED can be interdisciplinary in nature, as it lends itself to cooperation between many different agencies and groups. CPTED can be used to create guidelines and standards for future designs and for improvements of existing areas.

Chapter Two: Safety Audits

A safety audit is a

close examination of the physical environment for factors that influence the safety of people in that environment. For example, the audit looks at how space is arranged, the likelihood of a call for help being heard...A safety audit is about reducing opportunities for harassment and assaults of any kind against the most vulnerable people...and it can help evaluate complex safety threats which encompass general practices and policies (Safer City Task Force 1993).

Safety audits usually concern themselves with public or semi-public places, although a private landowner could conceivably audit his or her own property. Audits focus on factors such as lighting, signs, sightlines, isolation, entrapment sites, security, maintenance and overall design. These design features are similar to those used in crime prevention through environmental design evaluations. Safety audits are used to identify safety concerns and create practical solutions to improve the environment.

Safety Audits were created by a group in Toronto called the Metro Action Committee on Public Violence Against Women and Children (METRAC). METRAC developed the concept in response to violent attacks that were occurring against women in certain Toronto parks. METRAC created a *Safety Audit Guide* which gives instructions on how to conduct an audit and they developed a checklist of questions which forms the active part of the audit. METRAC's assumption in creating the safety audit process was that if

an area feels safe for those who experience the greatest amount of fear, then it will be safer for everyone.

How To Conduct A Safety Audit

Although there are different ways to conduct an audit, most audits follow the same basic steps. The scope and amount of work associated with each of these steps will depend on the size of the audit and the amount of energy the auditor can put into it. If the audit is only a small area, such as a single bus stop or the foyer of a building, it may be conducted by an individual or a small group of people. When conducting an audit in a community, or over an extensive piece of property, it is easier and more effective to have a larger group of participants. If a whole community is being audited, it is best to have enough people so that small groups of people can be sent to different sites in the community, thereby covering more ground. A site is usually a definable area, such as a playground, a bus stop or an alley. The optimum number of people per audit site is between four and eight, preferably with a cross section of backgrounds, abilities and needs.

The area that is going to be audited must be determined. The auditors may be interested in a lobby of a building, the entire building, a campus, a park or an entire community. In this Master's Degree Project, the focus will be on public areas within communities, but many more places can be audited, for example, a person could evaluate his or her own home. When the area has been determined, it can be useful for the auditors to take pictures, or draw rough maps of the area, so that they can indicate problem areas on these maps.

An audit team must be assembled. It is important to try to get a cross section of the population to participate, especially if the audit is occurring in a community, on campus or on the transportation system. People who are elderly, disabled or otherwise in a minority often have special concerns which are important to incorporate in the audit. Whenever possible, individuals representing these special needs groups should be included in the audit. It may be difficult to access volunteers for an audit. Many people are too busy to volunteer time, others will not want to participate because they perceive it will be dark and dangerous. The commitment of community residents to the safety audit process is very important to ensure the success of the process.

Information gathering is often an early stage of an audit. Audit teams may create a survey to try to understand who the users of an area are and what their concerns might be. This technique has been used by community associations in Calgary, by placing an ad or questionnaire in a community newsletter, as a means of soliciting for volunteers and identifying potential audit sites. Actual crime statistics should also be gathered. If possible, the community should determine what areas in their community have suffered from public crimes. If trends are apparent, such as repeated incidents at the same location, that area may become a natural area for an audit.

Audits should occur in the same area at different times of day. Once a date and time has been picked, the audit team assembles, has a brief discussion about what they are about to do and then visits the audit site with a checklist or list of questions. The checklist

indicates factors that should be examined, such as lighting, hiding places, entrapment sites, movement predictors, the ability for someone to be seen or heard if that person needed help, maintenance and general layout of the area. These questions are then answered by the team while they are at the site. Recommendations to improve the area should be noted wherever possible. After the audit, or walk around, is completed the audit team will reassemble to discuss what they have seen and to discuss ways that the area can be improved.

These recommendations are then written into a final report. Letters are written to city departments, individuals or landowners who have the authority to make changes. The audit team may have to make several attempts before contacting the right person and may have to be insistent about having the changes made. In some municipalities, a city department or an individual liaison may help the audit team to contact the city departments to ask for changes. One of the problems of safety audits is the lack of direction once the audit has been completed. Existing guides and handbooks do not give a clear indication of what steps are necessary to implement recommendations or who to contact to discuss problems.

Once an audit has been completed, the audit team should take responsibility for ensuring that the recommendations are implemented and for ensuring that the changes have had the desired effect. This begins a process of monitoring, which should be ongoing.

Safety Audits in Other Cities

Safety audits have been conducted in a number of other cities across Canada. Many audits are now being done by special interest groups, such as the Toronto Transit Commission and Calgary Transit. METRAC and the Council of Ontario Universities Committee developed a special guide for use on university campuses. The METRAC model of safety audits leaves the work of making sure that the audit's recommendations are implemented up to the audit team. The audit team is responsible for lobbying the municipality, department, individual or land owner until satisfactory changes are made.

In Edmonton, the Safer Cities Initiative Unit has created a safety audit guide, but instead of relying entirely on the audit team to ensure that the recommendations are implemented, the completed audit information may be turned over to the Citizens Action Centre. This is an information group which directs citizens to departments within the municipal structure. The Citizens Action Centre will then pass the recommendations for changes on to the correct departments.

Vancouver's Safer City Task Force, also encourages the use of safety audits. The Task Force produced 1000 copies of a Safety Audit Guide, which was not nearly enough for the demand. They translated the guide into Punjabi and Chinese. The safety audits were conducted voluntarily by community groups, businesses and individuals. The Safer City Task Force received audit results from 25 different groups or locations. *The Safer City Task Force Final Report* states that;

The safety audit program empowers people, especially the vulnerable, to make changes to a physical environment that has direct bearing on their personal safety or crime prevention in the community. While a safety audit is a worthwhile activity in itself, the process of working together to audit a location often leads to a broader examination of fundamental problems in our society, such as violence against women and the root causes of crime.

This report also makes four recommendations to the Vancouver City Council including the continuation of printing and distributing the safety audit guide, reviewing and responding to all safety audit findings, assigning a city department to promote the safety audit program and have staff conduct training sessions on request.

Pros and Cons of Safety Audits

There are a number of benefits that safety audits can have for both the individual and the community. Individuals may find that, if they participate in a safety audit, that they will develop a greater awareness of what makes them afraid. They may begin to understand why they feel safe and comfortable in some places, but not in others. This kind of knowledge may help them overcome their apprehension about certain places, because they can avoid unsafe places. Knowing what is wrong with a area is the first step in trying to improve it. Taking action and attempting to physically alter the environment can be a very empowering experience. In one person's opinion, nothing bad ever comes from an audit, and at the very least, an audit brings community cohesiveness as people work together through the audit process (Davidson 1995).

Problems occurring in safety audits include a belief that an audit will solve all the crime problems. Safety audits are merely one of many crime prevention tools which must be used together to effectively combat crime. There can be difficulty in finding committed volunteers who will assist in the audit. Audits work most effectively if there is a great deal of community buy-in.

The most successful audits seem to be accomplished by community activists who have some natural or learned ability to capitalize on the strengths of their neighbourhood. This is an important concept in community development (Kretzmann, 1993). Audit leaders need to be able to get a wide variety of participants from different walks of life. They need to know how to motivate residents to participate and how to encourage growth and change in the community.

There are problems concerning the types of checklists used in the audits. The original METRAC checklist tends to lead the audit team to certain answers and can be confusing. There are difficulties in getting the recommendations from an audit implemented and determining who, if anyone, should be assisting the communities in this task. Safety audits have little value unless the areas that are audited can be changed for the better. And, finally, there are difficulties in measuring the success of a safety audit, in quantifiable terms

Overview for Chapters Three and Four

Chapters Three and Four of this project contain descriptions of two communities that have conducted safety audits, as well as descriptions of some of the details about the audits, such as the number of participants, the recommendations for improvements that were made and whether or not they had been implemented.

The reasons for choosing these two communities were numerous. Millrise was chosen because it was one of the first three communities in Calgary to ever have been audited. This was done under the auspices of the Urban Safety Work Group (a sub committee of the Action Committee Against Violence) as a class project. Because of factors relating to this community being chosen as an audit community, as opposed to the community choosing to conduct an audit itself, the audit was not particularly successful; the reasons will be more fully developed in Chapter Three. Millrise is a suburban community, located at the far south extreme of the city, and of the 15 communities that have completed audits in the city to this date, is the farthest away from the city centre. Furthermore, this community was chosen as one of the case studies for this Master's Degree Project because, as part of the Millrise audit team, I was intimately involved in the entire audit process.

Wildwood was chosen as the second case study community because it was a much more successful audit. This community was looking for some way of making their community

safer, they had an active and energetic community activist and a number of willing volunteers. At the time that Wildwood chose to do their audit, the Urban Safety Work Group had more experience dealing with community safety audits and had established the position of Safety Audit Coordinator. This position was available to assist the community so there was a support network which did not exist for Millrise audit.

Other communities could have been chosen for this project. Marlborough Park has completed an audit, which can be seen as being a success. Other communities, such as Haysboro, Triwood and Mount Pleasant have also completed audits, all to varying degrees of success. I chose communities with which I had been in close contact and about which I had documentation.

Chapter Three: Case Study: Millrise¹

Description of the Community

At the time the audit was completed in 1994, Millrise was a community of 4,000 people. Development began in this southwest community in the early 1980s. Prior to that, the community had virtually no residents and was devoted to farmland. In 1982, development began and the population has been rising ever since. The community is located south of Canyon Meadows Drive and west of Macleod Trail (see figure 3). The neighbourhood is characterized by detached single family dwellings and 91.1% of the residents own their own homes. At the time of the audit there were 1,350 homes (Census 1993), 1,202 of which were single family detached houses. There were 94 duplexes and 53 row houses. There were two proposed housing developments for vacant spaces in the community, both of which have since been started.

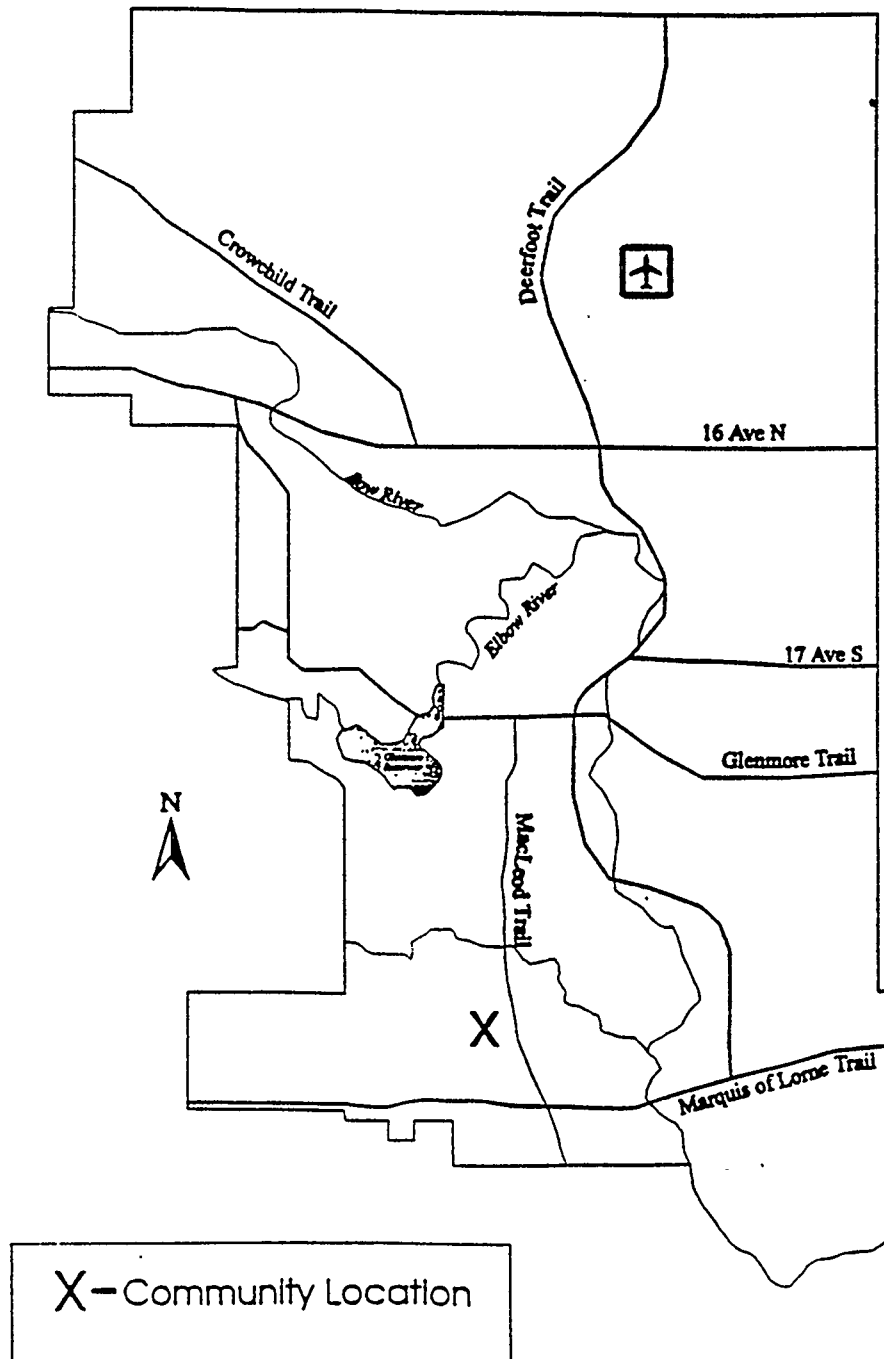
According to the 1991 City of Calgary Census, the demographics of the area were very homogeneous. Most of the residents indicated that they were of European or multiple origin and the visible minority population was only 2 percent. The average annual family income was \$48,757. The split between male and female residents was almost fifty-fifty.

¹ The information pertaining to Millrise is based on a class project that I completed in The Faculty of Environmental Design in 1994. The result of this project can be found in *Safety in the Suburbs: Millrise Community Safety Audit* by Mayja Embleton and Graeme Fuller, prepared for the Urban Safety Work Group, the Action Committee Against Violence and the Millrise Community Association.

There were relatively few teenagers in the community and this, combined with the other factors, seemed to indicate that the community could easily be characterized as a young, middle income community.

Figure 3

The Location of Millrise Within Calgary



Crime Statistics in Millrise

In Millrise, criminal acts against persons are less significant in number than crimes against property. The highest category of criminal acts in Millrise is that of missing persons, and this number is most likely due to young children straying away from home and being labeled missing, as no actual kidnapping or abductions had ever been reported prior to the date of this safety audit. From 1990 to the time of the audit in 1994, the population of Millrise increased by approximately 600 people with no corresponding increase of criminal activity. There were no reported cases of murder, prostitution, rape or drugs and there was a decrease in sexual assaults from 1990 to the audit date. 1991 appeared to be beleaguered by higher than normal amounts of theft and vandalism. It was suggested by a police representative that this is often the case when an individual or group of criminals targets a certain neighbourhood, and the higher than usual criminal acts occur until they get caught or move on to a new target. It was possible, due to perseverance of the audit team, to get the Calgary Police Service to provide information regarding the exact locations (or closest intersection) of the personal crimes that occurred in 1993. A map showing this information is available in the original audit report.

Figure 4
Selected Crime Statistics for Millrise for 1991-1993

Selected Millrise Crime Statistics			
	1991	1992	1993
	1	2	
Theft-Under	3	7	6
Theft-Over	2	1	1
Vandalism	6	2	4
Sexual Assault	1	0	1
Common Assault	8	5	4
Missing Persons	6	10	10
Misc. Attack	0	0	2
Car Prowling and Theft	39	28	21
Car Vandalism	20	8	5

(Adapted from Embleton and Fuller, 1994)

As noted in the original audit report, the perception that crime is not a problem in this community is likely borne out by the low crime statistics and may account for some of the disinterest that the audit team encountered within the community. Because of the low incidents of crime, the audit team focused on areas in the community where *the perception of fear was the highest*, rather than on areas where crimes had occurred. The only area where the perception of crime was high and where criminal activity had previously occurred was the local strip mall which was one of the sites audited.

How the Audit was Introduced to the Community

In 1994, the Faculty of Environmental Design offered a class taught by Professor Theresa Baxter, focusing on safety audits. The six students in the class were divided into three

groups; two of these performed evaluations on communities that had already been audited (Bridgeland and Dover) and the third group, consisting of myself and Graeme Fuller, were instructed to organize and conduct an audit on the community of Millrise.

Millrise was the last of the communities chosen by the Urban Safety Work Group (a subcommittee of the Action Committee Against Violence) as part of a pilot project on the viability of safety audits in Calgary. The two criteria that the committee thought were important were: 1) that it be a strong active community, and 2) that there be a strong Ward Alderman (Urban Safety Work Group Minutes, December 3, 1992). The Urban Safety Work Group selected Bridgeland and Dover as the first two communities on which to conduct pilot safety audits. Bridgeland had recently experienced incidents of crime, is an inner city community and had an active community. Dover was chosen because it was a strong community that sponsored safety walks for children. Millrise was chosen as a southern, suburban community, to contrast with the other two inner city, communities (Urban Safety Work Group, Minutes December 1992).

We began our process by collecting information about the community, including a community profile and crime statistics. Information about the community was collected through the Community Profile published by the City of Calgary's Planning Department. On February 8, 1995, we met with the Millrise Community Association to introduce the project and, having met with approval, began to solicit volunteers from the community at large.

Volunteer Solicitation, Participants and the Audit.

In order to find volunteers from the community, the project team developed a brochure and spent an afternoon delivering it to every house in the community. The brochure described safety audits and invited residents to join in a focus group to determine which areas in their community should be audited. The audit team did not receive any phone calls as a result of this brochure and decided that more aggressive means would have to be employed. A questionnaire was developed and delivered to every fifteenth house in Millrise. The questionnaire was delivered in person by knocking on doors, so that the project could be explained, to generate interest and find volunteers. At homes where no one answered, a copy of the questionnaire was left and a set of instructions explaining that it would be picked up from the mailbox the following day. Out of 88 questionnaires distributed, 37 were filled out and returned. The results were then tabulated and aggregated. The questionnaire and its the result can be found in Appendix A.

Through continued meetings with the Community Association and the area Block Watch, 15 people were found who indicated a willingness to participate in the audit. At this point, the project team interviewed a number of professionals, including a city planner, community association executives and Constable Jim Roberts, head of the City of Calgary's Crime Prevention Through Environmental Design Unit, to determine if there were any special concerns that we had overlooked that should be taken into account during the audit. The Community Association representatives identified concerns similar to those of other resident participants, the City Planner drew our attention to the physical

constraints to the community, such as its situation at the edge of the city, bordered by farm land and the Constable outlined interesting facts about suburban crime, such as the fact that although residents dislike unlit playgrounds in their neighbourhood, there has never been a recorded attack in a tot lot. This shows how the perception of an area is perhaps more important than the reality.

A safety audit was scheduled for March 14, 1995. Of the 15 interested community members, six came to the meeting. Three Environmental Design students also participated. A short briefing session occurred. Six sites were pre-determined as areas of concern, based on the results of the questionnaire previously distributed in the community. Checklists and maps of the areas were distributed to the groups. Each group, consisting of a mix of community members and students, visited two sites. An hour was allocated for this, after which the groups met again to discuss their findings.

In this debriefing session, the participants had a chance to discuss the characteristics of the community which made them feel most ill at ease, such as the poor lighting in some areas. Potential solutions were discussed for each one of the areas visited. The participants were given some additional information about safety audits and were told that the final report would be given to the Community Association, and the onus would be on the Association to make the necessary contacts to attempt to get the recommended solutions implemented. The participants were encouraged to stay in contact with the association to ensure that it followed through with this necessary activity. Participants were also encouraged to stay involved in the audit process, by re-visiting the sites at

different times of day and in different seasons, to see how the environmental factors affected their feelings of safety.

The project team took the results of the audit, which included the completed safety audit checklists and notes from the debriefing session, and wrote the final report, *Safety in the Suburbs: Millrise Community Safety Audit*. The report was then given to the Urban Safety Committee, The Action Committee Against Violence and to the Millrise Community Association. Because the class was coming to a close, the project team considered that their task was finished and encouraged the community to take the initiative to ensure that the recommendations were presented to the appropriate city departments or individuals, and then implemented.

Summary of Recommendations Made

Six sites were visited during the Millrise audit and each area was given a priority by the audit team so that the community could focus on making the most important changes first. What follows (figure 5) is a summary of the recommendations that were made in *Safety in the Suburbs: Millrise Community Safety Audit*. The original report contains a more detailed description of each area, including a site plan, photographs and summaries of the answers from each of the eleven sections of the checklist.

Figure 5

Summary of Recommendations Made as a Result of the Millrise Audit

Location	Concerns	Recommendations
St. Patrick's Church Parking Lot	<ul style="list-style-type: none">• Inadequate lighting in parking lot• Garbage enclosure creates an entrapment and hiding spot	<ul style="list-style-type: none">• Add lights to parking lot.• Repair or turn on small sidewalk lights in parking lot• Remove or redesign garbage enclosure doors
Tot Lot	<ul style="list-style-type: none">• Fences along walkways create an entrapment site.• Playground equipment not illuminated at night.• The lights on the path do not spill into playground area.	<ul style="list-style-type: none">• Top two feet of fence should be replaced with lattice to increase visibility yet maintain privacy.
West Boundary	<ul style="list-style-type: none">• Lighting is the primary concern on street.• Large trees and shrubs create concealment places.	<ul style="list-style-type: none">• Encourage residents to establish a porch lights on program.
Strip Mall	<ul style="list-style-type: none">• The doors of garbage enclosure create hiding and entrapment site• The amount of merchandise at the local stores may create a situation that attracts crime to the area.	<ul style="list-style-type: none">• The doors to the two garbage enclosures located at this site should be removed or redesigned.
Old Food Barn	<ul style="list-style-type: none">• The present condition of this building is quite poor as it has become run down.• the lights have been removed and the area is very dark.	<ul style="list-style-type: none">• The owner of the property should be contacted to make the appropriate changes to this building.• Lighting could be added to the area to discourage vandalism.
Tree Farm	<ul style="list-style-type: none">• Area is very dark at night.	<ul style="list-style-type: none">• Avoid area at night.• There is no need to walk through the area to reach other areas of the community. Pedestrians should walk along sidewalk where proper levels of lighting are maintained.

Implementation of Recommendations

After the final report was submitted, the Community Association discussed the possibility of creating a safety sub committee to deal with the safety issues in the community.

Kathee Habijanac, who was the audit team's main contact throughout the audit and the Block Watch Chair at the time, was asked to take on this position. She declined because of time commitments and it appears that the Community Association did not pursue this avenue and no subcommittee was formed (conversation with Habijanac, January 23, 1996). Habijanac had brought the report to the Community Association's attention and some discussion had occurred, but it appears that no one was assigned to take on the task of writing letters as a follow up to the recommendations that were made. Habijanac was uncertain whether or not the report was distributed to places such as the Church, where changes were suggested.

There was no action taken at the Food Barn. A member of the community apparently called City Hall once to ask that the abandoned building be torn down, but it is still standing to this day and remains a target for vandalism. The church, another independently owned building in the community, had several concerns noted in the audit, including a lack of outside lights. It appears the church had never been contacted by the Community Association and may, therefore, not realize that the dark areas in its parking lot are perceived as a threat to the residents. Problems were identified at the strip mall. The inability of the strip mall to retain tenants may be alleviated by making the area more inviting to normal users.

The tree farm was another area of concern. The area behind the tree farm is under development as a recreation facility, for field sports and skating. Since the audit, the city has removed the underbrush and trimmed back the trees, as part of the redevelopment. This development, combined with the annual pruning and cleaning, has greatly improved the area.

Success or Failure of the Audit

Because the audit was not acted upon by the Millrise Community Association, it is necessary to say that this was not a successful audit. The Community Association did not follow up on the recommendations made and as a result none of the recommendations were ever implemented. There are a number of reasons that can be identified that may explain why the community association did not take any action, and these are described in the following section.

In the Fall of 1995, there was some discussion by Block Watch to try to revive the audit and re-visit the sites to see if the recommendations were still valid and to see if they could be implemented, however, the Block Watch was side tracked by other issues and has not yet followed through.

Factors Influencing the Outcome

The lack of success in the Millrise safety audit can be attributed to a number of different elements, most of which fall under a broader heading of lack of interest or participation by the community. In the first instance, Millrise did not ask to have an audit conducted in its neighbourhood. The community was chosen by the Urban Safety Work Group because it is a suburban community with an active Board. These criteria are not sufficient to ensure a successful audit. The community must, in some manner, feel the need to engage in this type of community development activity, if the results are going to be successful. As a result of the way Millrise was chosen, there was very little buy-in by either the community association or the residents. Some of the disinterest on the part of the community may also be attributable to the low crime rates in the community.

Furthermore, the Community Association was very involved in managing other affairs and could not find the energy or inclination to follow through with the audit recommendations. At the time the audit was conducted, the Association was creating mission statements and job descriptions, as well as managing development permits in the community. As the community continues through its life cycle, and as the children in the neighbourhood grow up and become youths who may be more inclined to commit vandalism or petty crimes, the needs of the community may change and a greater emphasis may be placed on crime prevention. The need for better delegation of activities

to the volunteers by the Board members was also identified as a problem (Conversation with Habijanac, January 23,1996).

More recently, a new school has been opened in the community and fundraising for school initiatives has begun to take up a considerable amount of the resident's time and energy. The creation of a new committee to deal with the organization and building of the new recreational facilities north of the tree farm may also be more of a priority to the residents than safety issues. The former Block Watch chair also identified apathy as being a major problem among residents, citing an example of the recent community elections in which only six community members came out to vote for a Board election.

The crime rate in Millrise is very low and has been decreasing. The lack of perceived need by the community may explain the poor response the audit team had to its requests for volunteers and may also explain why the need to follow up on the recommendations was not seen as a priority by an already busy community association. There had been no recent attacks or assaults in the community and this would also contribute to the perceived lack of need.

Chapter Four: Case Study: Wildwood

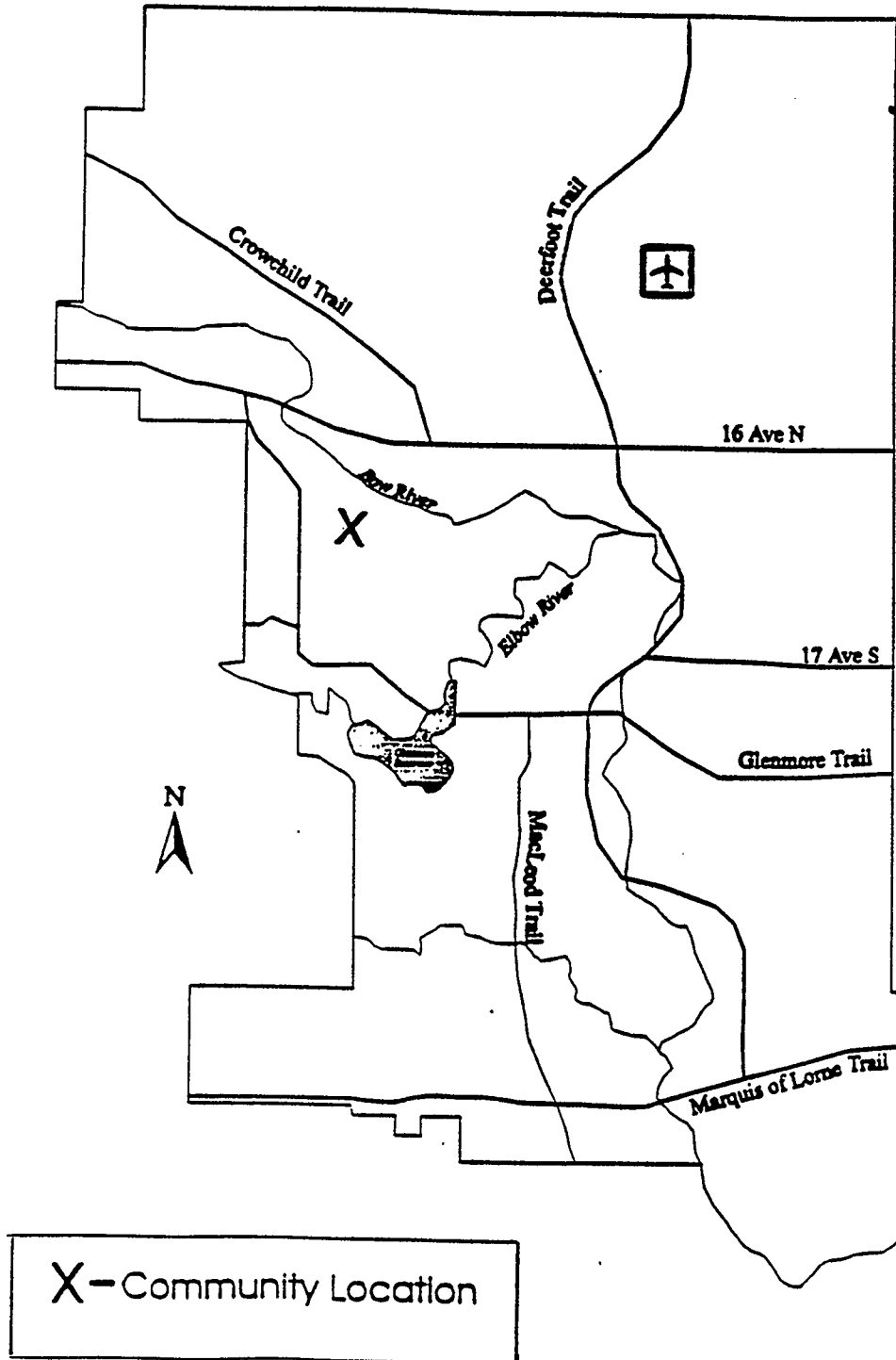
Description of Community

Wildwood is located in the south west quadrant of Calgary. It is bordered on the north by the Bow River, on the south by Bow Trail, on the east by 38 Street and on the west by Sarcee Trail (see figure 6). There is one elementary school and two churches within its boundaries. The zoning of the area is over half (53.8%) park or open space. Residential use covers just over 32% of the land and is classified as low density. There are 1,023 single family homes in Wildwood, 15 duplexes and ten converted homes (Civic Census 1994). The average family income in the community is \$69,492 (Statistics Canada 1991).

According to statistics Canada, in 1991 there were a total of 2,655 people living in Wildwood community. 770 (or 29%) of the residents reported that they were of British origin, other European origins were reported in numbers ranging from 25-70. A small southeast Asian contingent of 55 people reside in the community and 240 people declared themselves of multiple heritage. The majority of the residents (almost 900) are between the ages of 25 and 44. There is a corresponding group of children younger than 14 (approximately 375) and there is a fairly substantial group of seniors (approximately 475) (Community Profile 1995).

Figure 6

Location of Wildwood Within Calgary



How Audit was Introduced to the Community

In June of 1995, as part of the duties of the Safety Audit Coordinator for the Urban Safety Work Group, I contacted the Wildwood Community Association and offered to come to one of their Board meetings and present information about safety audits. This offer was accepted and I attended a Community Association meeting. The concept and steps to an audit were presented and the association was left to decide whether they wished to pursue this activity. There appeared to be a high level of interest in the community, much of which was related to a sexual attack against a woman that had occurred earlier in the spring in the area around the community hall, which had raised the community's awareness about safety issues. One woman in the community, Colleen Miller, had asked the Parks and Recreation Coordinator for the area, Cheryl Fleuger, if there were any programs or self defense courses available that could help the community overcome the fear that this attack had created.

I was later contacted by Colleen Miller, an active member of the Board and a Wildwood resident, who volunteered to organize an audit. September 20th was chosen to hold the audit and volunteers were solicited. In the interim, I collected some statistics on incidents of crime within the community. Unfortunately, the Calgary Police Service did not want to give out the specific locations of where crime had occurred in that community.

Concerns about confidentiality, as well as the time it takes to search for this information,

were given as reasons for not supplying this information. However, they were willing to give out aggregated numbers for the various crime categories, which appear below.

Crime in Wildwood

In an attempt to better understand the community of Wildwood, crime statistics for the previous year were gathered. The following table indicates the number and type of crimes that occurred in 1994.

Figure 7

Selected Crime Statistics for Wildwood, 1994

Type of Crime	1993	1994	1995 (Jan-June)
Assaults	9	10	3
Robberies	0	1	0
Car Prowling	45	42	28
Indecent Acts	0	1	0
Purse snatching	0	0	0
Sexual Assaults	3	2	2

Volunteer Solicitation, Number of Participants

Volunteers for the Wildwood audit were recruited from local churches, schools and Community Board members. Articles were printed in the community and school newsletters, asking for volunteers from the community. Constable G. Gaska from District 2 headquarters participated in the second night of the audit, when the parks on

Wildwood Drive were visited. Altogether, 14 people were involved in the two nights of the audit. Miller stated that she was pleasantly surprised that about half of the volunteers had called her in response to the newsletter. Of these participants, at least two have continued to take an active interest in the Community Association (Conversation, January 22, 1996).

Summary of Recommendations Made

The audit in Wildwood was conducted on two separate nights. Sites were chosen during the meeting, by participants discussing which areas made them feel the most insecure. During the first, on September 20th, the volunteers divided into two groups and each group audited two separate sites. The participants enjoyed the audit and believed it to be an easy and thorough activity. As a result, the participants decided that they should visit more sites in one week's time. After the audit was completed, Miller took the audit checklists and wrote a report that detailed all of the audited sites, the problems they encountered and potential solutions. The report also indicates the most appropriate person or city department to contact in order to get the recommendations implemented.

The Wildwood report indicates in its conclusions that the primary requirements in the community are a pruning project to clear out shrub beds, increased lighting in the community green spaces, access to a public telephone for emergencies. The need for better signs was also identified. Overall, however, the audit participants felt that most of the public spaces in the community were relatively safe and that doing the audit was a

interesting and positive experience. The recommended changes were suggested to improve the perception of safety in the community. The following table is a summary of the recommendations that appear in Wildwood's audit report.

Figure 8

Summary of Recommendations Made as a Result of the Wildwood Audit

Location	Concerns	Recommendations
Playground at 50 Wedgewood Drive SW	<ul style="list-style-type: none"> • Poor lighting • Poor signage • No nearby telephone or access to emergency help 	<ul style="list-style-type: none"> • Install light on existing pole in back lane • Install sign indicating street address and nearest telephone • Install phone at community centre
Spruce Drive Playground	<ul style="list-style-type: none"> • No sign indicating where emergency help can be obtained. • No pedestrian crosswalk • Guide wires at base of pole poorly marked. • Damaged equipment not fully removed 	<ul style="list-style-type: none"> • Install sign • Install crosswalk (sign and road markings) • Remove pole and/or guide wires or indicate with fluorescent markings • Replace damaged toy with new one
Wildwood Community Centre	<ul style="list-style-type: none"> • Bus stop poorly lit • East side of hall poorly lit • Bushes create hiding places • Landscaping around tennis courts creates hiding places • No emergency service • Natural surveillance around Hall is poor • Tree by parking lot exit blocks view • No loading zone sign 	<ul style="list-style-type: none"> • Get light in bus shelter • Light hall from roof • Trim back bushes in area • Install pay phone by community hall • Create awareness campaign (newsletter) asking people to keep eye on the area • Remove tree by parking lot exit • Post a loading zone sign
Playing Fields at Community Centre	<ul style="list-style-type: none"> • Poor lighting around skating area • Better address sign and location of telephone • No quick emergency access 	<ul style="list-style-type: none"> • Have Community Association consider more lighting • Contact AGT about telephone • Ask for a Block Parent in this area
Park on Wildwood Drive SW	<ul style="list-style-type: none"> • Poor lighting in northern edge of park • No signs or garbage cans • Shrub beds are overgrown • Speeding cars along Wildwood Drive 	<ul style="list-style-type: none"> • Install garbage cans • Clear and prune shrub beds • Contact police about possible solutions to speeders

The Implementation of Audit Recommendations

This section will focus on whether or not the recommendations that were made as part of the Wildwood audit process have been addressed by either the city or the community.

The success of this audit is due, in large part, to the commitment and energy of Miller, who took on a leadership role and maintained contact with the various city departments throughout the entire process. The commitment of the community, to follow up on its recommendations and act upon them, also contributed to its success. The fact that Wildwood included details on who to contact for each recommendation increased their success.

The recommendation to improve the lighting in the various parks in Wildwood is under consideration by the City of Calgary Electric Department. Although responsibility for lighting in Parks is the responsibility of Parks and Recreation, they often pass on recommendations to the Electric Department, who actually put in the new lights. They have been made aware of the desire for lights in the neighbourhood parks, and the need for these lights was also identified by Constable Gaska who assisted in the audit. An independent report conducted by nursing students at the University of Calgary as part of a “wellness” evaluation of the community also emphasized the need for more lights. The City Electric Department will estimate the cost for the different light standards that will be needed and will be taking a proposal to City Council as part of this year’s budget process. The ability for a community to increase its lighting is highly problematic. Lighting is expensive, and there are many regulations concerning where and when the

city will pay for such additional lights. There are a number of rental agreements that can be made with the city, and these may be a solution for this community. Miller is not altogether hopeful that they will see all of their lighting requests actualized; however, the probability of lighting some of the parks, the ones with the easiest access to existing light standards, is slightly higher.

The lighting of the bus stop on Spruce Drive is also being investigated. The difficulty with this stop may be that it is on a transformer line and therefore not on an existing lighting pathway. If cables have to be strung underneath the road, from the other side of the street, it could become very costly to make this improvement. The Community Association is looking at the problem of lighting the East face of their community hall and have asked their electrician for a quote to install new lights on the eaves of the building.

The installation of a pay phone is an important issue for the community, but one that they may not be able to implement. AGT has many regulations about the use and placement of their telephones. One such regulation demands that at least 20 calls per day must be made on the phone, which is unlikely given the size of the community and the low demand for a phone booth for non emergency purposes. This is a CRTC regulation and any phone not conforming to it will be removed. There is an additional problem in that a regular phone can not be placed outdoors because the weather and vandals could soon destroy it. At the time that this was written, the contact for AGT was investigating other solutions to this problem.

Improving the signs in the Wildwood parks may be contingent on whether or not the telephone is installed. The audit participants wanted to see signs placed in the parks that would inform users of the location of the nearest public telephone. If the phone is not installed, the necessity of these signs diminishes. Parks and Recreation has been informed that address signs indicating the street address of the various parks is desired by the community, but this type of sign does not seem to be part of the department's policy.

In a continuing effort to make the community safer, there has been a parallel effort by the community to increase the number of Block Parents in the neighbourhood. An ongoing campaign has been launched to maintain and solicit volunteers for this program, and at least two new members have joined as a result of increased publicity associated with conducting the audit. Unfortunately, the Block Watch program in the area has broken down over the years and is not organized at the moment. The community is looking into developing leadership in this program and reestablishing it. This initiative is separate but linked to the audit.

A sign for the requested crosswalk was erected this fall, and the cross walk street markings will be painted on the pavement once the snow has cleared in the spring. Miller will also request that the Transportation Department paint a Playground decal on the road, in an attempt to alert drivers to the playground zone in the area. In a further effort to reduce speeding in the community, the Transportation Department has suggested using Wildwood as one of the communities to use portable "speeding education signs", which

will be put into place in April, 1996². These signs include radar that displays the speed that the motorist is driving and reinforces the legal speed limit with signs both before and after the radar.

The riding toy that was broken in one of the playgrounds will not be dealt with until the spring, at which time Miller will be calling Parks and Recreation to have it replaced with a new toy, or removed altogether.

The pole in the playground that is supported by guide wires will be painted and a plastic cover will be put around the bottom, by Parks and Recreation, in the spring. Parks and Recreation took the recommendation to prune back the bushes and shrubs in the parks very seriously. On a closer examination they realized that the bushes were, in some cases, over 20 years old and in desperate need of cutting back because they were becoming diseased. Some parks in the community have already been done, and the others are slated for the spring. This recommendation was implemented within two weeks of being made to Shirley Brown at the Parks and Recreation Centre West Office. Bushes that were blocking the view of people leaving the community hall parking lot were also removed, and may be replaced in the future by more appropriate types of trees.

² From a letter dated December 8, 1995 to Colleen Miller from Dennis Danchuk, Transportation Department, City of Calgary.

Success or Failure of the Audit

To this point, the Wildwood audit can be considered a success. The participants enjoyed the experience enough that they decided to continue the audit for a second night. The community felt validated in the concerns that they identified for two reasons. The first was that the Calgary Police Service officer that accompanied the audit on the second night agreed that their concerns for the unlit parks were important. This provided the residents with a sense of validation of the work that they had been doing, and was important because it involved the Police Service in a community initiative. Second, a group of nursing students from The University of Calgary, working independently on their own study of community health and welfare, identified many of the same concerns. This validation made the audit participants feel that they had accomplished a worthwhile task.

Miller stated that she did not feel that there would be a need to revisit the areas in another season, but she does feel that the areas should be re-visited every two years or so, as a general maintenance plan for the community. In this way, the community could keep tabs on things such as the broken playground toys and overgrown bushes. She also identified the need to stay in contact with the people who have helped implement the recommendations that are being made.

Factors Influencing Outcome

Several factors can be identified that influenced the outcome of the Wildwood safety audit. These factors range from the energy and enthusiasm of individual participants to a greater acceptance of the safety audit process by departments within the City of Calgary, as a result of publicity and endorsement coming from the Urban Safety Work Group. This endorsement came in the form of a letter written by Alderman Bev Longstaff to Department Heads asking for their attention and support of the audit final report.

The most important factor that created a successful audit for this community was the energy and ability of the key community organizer, Colleen Miller. Miller has had experience working in the Aldermanic office and was prepared to take on the time consuming and onerous task of letter writing and telephone calls necessary for getting city departments to take action. It was primarily her ability to make contacts within the city that allowed many of the recommendations to be seriously considered. Furthermore, Miller was very careful to keep the Community Association Board and membership aware of her activities. She made announcements at meetings and through school and community newsletters to alert residents about the audit and subsequently, the changes that were going to be occurring.

The community itself was very supportive of the audit, partly as a result of the fear created by the sexual assault earlier in the year. The community was also assisted by the

Parks and Recreation Coordinator, Cheryl Fleuger, who was instrumental in arranging the recommendations that were Parks and Recreation's responsibility, such as the pruning.

In the spring of 1995, the Urban Safety Work Group was examining different ways in which the audit final reports could be introduced into the City. As a result, Alderman Bev Longstaff wrote a letter to Department heads and commissioners explaining that the final audit reports for three communities, Wildwood, Marlborough Park and Southwood, may be sent to their departments. The letter stated that audits were an important community development activity and that the departments should consider the findings seriously. This awareness campaign may have facilitated some of the implementation of some of the recommendations. Additionally, the position of Safety Audit Coordinator, which had not previously existed, created the opportunity to contact city departments under the authority of the Action Committee to explain how important the results of the safety audits were.

Chapter Five: Improvements and Recommendations

Overview

This chapter will examine the problems encountered during the process of conducting safety audits. It will focus on problems discovered during the safety audit process. These concerns will focus on communities' attempts to get recommendations implemented. Possible solutions for addressing these problems will be proposed. The solutions will focus on Calgary's involvement in safety audits but these suggestions can be adapted to other Canadian cities. Attention will focus on the case study examples from Chapters Three and Four and on other safety audits that have been conducted in Calgary. Each recommendation is preceded by a brief description of why that recommendation is being made.

Information Dissemination

As with any community related endeavor, one of the most important aspects of a successful audit is the ability to communicate to residents the availability of the program

and the steps that need to be done. The first problem, therefore, focuses on devising a way for communities to receive information about the existence of safety audits and details on how to conduct them. The three most important things that a community needs to know are:

- What a safety audit is,
- How to conduct a safety audit, and
- Where to go for help

To fulfill these needs the Action Committee Against Violence commissioned the *Calgary Safety Audit Handbook*, a step by step guide to safety audits made for communities (1995). This book was distributed by the Federation of Calgary Communities to all the community associations during the summer of 1995. The Action Committee Against Violence, after deciding to encourage safety audits in Calgary, conducted a training program for Social Service community workers and Parks and Recreation coordinators so that they would know how to conduct audits, in case the need arose in a community. This training program was held on January 31, 1995 (From Training Agenda, 1995) .

Other Canadian cities have taken similar steps. Winnipeg's Safe City Committee, Vancouver's Safer City Task Force and Edmonton's Safer Cities Initiative Unit are among the organizations that have created and distributed safety audit handbooks or guides. The Canadian Housing and Mortgage Corporation is now working on a guide aimed at rural and urban housing complexes, rather than whole communities. In Calgary,

the available resources for conducting a safety audit in Calgary are commendable. There is a step by step guide, the *Calgary Safety Audit Handbook*, and a seven minute video, *The Safeside: A Community Safety Audit Video*. Using these resources, a community should be able to complete the steps of an audit without outside help, although additional help is often sought. It is imperative that these resources be available to communities on an on-going basis. The guide and video are currently available through the public libraries, police offices, Social Service offices and Park and Recreation offices and, although even this is not enough exposure, they must continue to be available through these sources.

The creation of these guides and kits is the first step. Next, a logical and comprehensive way of distributing the information must be created. As mentioned, the Federation of Calgary Communities made sure that each Calgary community association received a copy of the *Calgary Safety Audit Handbook*, however, steps must be taken to ensure that this will be an on-going initiative. Communities that received the Handbook in any given year and did not express interest in conducting an audit, may feel differently in the next year, when a new Community Association Executive is elected and priorities change.

Recommendation 1: *That the Urban Safety Work Group continue to publish and make available the Calgary Safety Audit Handbook and The Safeside: A Community Safety Audit Video, to Calgary communities on an on-going basis.*

Running training programs for community development workers, such as social workers or Community Resource Coordinators, is also a step in the right direction. The training sessions create a pool of community workers who, even if they had not been involved in an audit, are familiar with the concept and would be able to suggest an audit to a community that was looking for a crime prevention technique. Again, however, this type of event would have to occur on a regular schedule. As new staff or personnel are hired by organizations such as City Social Services or Parks and Recreation, the training programs would have to be repeated. In order for this to be accomplished there must be agreement at senior levels of management that this program is worthwhile to devote time and resources towards.

Recommendation 2: That the Urban Safety Work Group, or its designate, hold regular or annual training sessions for community development workers or that new community development workers attend the next possible community safety audit being held in the city.

In my experience as a Safety Audit Coordinator, not one community decided to conduct an audit based solely on the receipt of the handbook. In some instances, such as Haysboro and Acadia, the ward alderman encouraged the community association to take on the task. Some communities did indeed take their alderman's advice. However, several of them did not follow proper procedure. For example, one community resident conducted an "audit" by driving around in his car and determining that there were no problems that he could perceive. The environment of a car is substantially different than

being outside in a park or at a bus stop, so his findings may not be adequate. There are a few communities, Wildwood and Marlborough Park among them, that were actively looking for tools that would help them make their communities safer. Communities that fit into this category often have a history of violent incidents, or a recent assault, which has made the community more sensitive to safety issues.

The more common way for communities to become interested in the safety audit process, however, was to be contacted by the Safety Audit Coordinator who would explain the steps of an audit and the benefits that may result in conducting an audit. Most of the 127 communities in Calgary were contacted in the summer of 1995 by this Coordinator. Of these, over 40 subsequently requested a meeting with the Safety Audit Coordinator and the Community Association or Block Watch. The numbers seem to indicate that some type of direct contact is necessary before a community is willing to commit to an audit. The necessity for this direct contact seems to lie in the anxiety and lack of expertise of the community associations which are reluctant, even with the step by step instructions in the Handbook, to start an audit without assistance. This anxiety is likely due to apprehension about tackling an unknown task. Another important task for the person explaining the concept to the community is to describe improvements that have occurred in other communities so that communities can see what is possible to do in their neighbourhoods and what the results may be.

All of these reasons seem to point to the need for a person whom the communities can contact to receive more information about how to conduct an audit and to offer the necessary support that communities seem to desire. Many of the communities that completed audits were hesitant to take on the task themselves and felt much more confident once they were able to ask questions and were assured that a resource person was available to assist them.

***Recommendation 3:** That a person or person(s) be appointed to act as the primary contacts for communities to offer communities advice and assistance in conducting safety audits or that in the absence of a dedicated position that the Urban Safety Work Group continue to promote safety audit material through police offices, Social Service Offices, Parks and Recreation Offices and the Public Libraries. Community Associations and Block Watch organizations should be contacted annually by either the Urban Safety Work Group, the Federation of Calgary Communities or a designate to encourage the continuation of the program.*

Volunteer Recruitment

Once a community association or organization has decided to conduct an audit, the process of recruiting volunteers begins. The recruitment of volunteers for the community safety audits can be difficult. According to safety audit literature, an audit should attempt to find volunteers that span a good cross-section of the population and, whenever possible, people representing the disabled, elderly or minority groups should be included

(METRAC, 1992). Unfortunately, it can be extremely difficult to recruit any volunteers even in communities where there is a significant demand for community development, much less volunteers from special interest groups. In Chapter Three, the problems associated with the recruitment of volunteers for Millrise were described. Despite serious and aggressive techniques used by the audit team, it was difficult to find volunteers for the audit. In Wildwood it was less difficult to find volunteers because of interest within the community and because of the activism of the key community contact.

In the audits that occurred in Calgary during 1995, several different methods of recruiting volunteers were used. Often, the organizers of the audit were associated with their Community Association or Block Watch. In these cases, members of these organizations were requested to volunteer. In many communities, notice of the safety audit was posted in the community's local newsletter requesting volunteers from the residents. In some cases, a notice was published in the "Neighbors" insert of the *Calgary Herald*, in the Community Events section. Links were also made with the Calgary Police Service and on several occasions the PACTS (Police and Community Telephone System). This system was used to direct a message to all PACT subscribers in a given geo-code. Communities were encouraged to approach special interest groups, such as the schools, daycares and senior's organizations within their communities to find residents who have special concerns or needs.

Recommendation 4: *That links to community support groups for the elderly, disabled, newly immigrant or other special interest groups be formed so that, when necessary,*

volunteers may be found through these support groups. As appropriate, services such as an escort to the safety audit or providing child care services during the audit, may be necessary to encourage the participation of some members of the community.

Volunteer management, such as compiling a list of names and phone numbers, was not done with many of the audits. This makes it very difficult to do follow-ups, clarify questions for the final report and keep the participants informed about the success of the audit. Most of the audits conducted to date have not kept volunteer lists, but Wildwood was asked to do so. It is hoped that if communities keep such a list, they will be able to question the participants at a later date, or they will be able to invite the same participants to future audits. Bridgeland completed its audit in 1993 and inadequate lists of volunteers were kept from that audit. An attempt was made to track down the volunteers to ask their opinions about the Bridgeland audit, but this proved to be an almost impossible task. Inadequate documentation makes it difficult to create a full final report.

***Recommendation 5:** Communities undertaking safety audits should keep accurate lists of the names and telephone numbers of volunteers for future reference*

Police Statistics

Collecting accurate crime statistics from the police is important if a community wants to audit areas that have had incidents of criminal activity. The police have the ability to

identify exactly where every criminal offense has occurred, however it seems difficult to obtain this information. There is an official policy regarding the information and statistics that they collect. The police are not allowed to give out anything other than general or aggregated information, unless it is approved by a senior officer. This accounts for the different responses that audit teams have encountered in the past. This problem could be solved by forging links between communities and the police department.

Often, the police are concerned about confidentiality and security. For example, they are very wary of giving out information about break ins and robberies, because they feel that the home owners have already been violated and they do not want to make them fear a repeat burglary. The police are more willing to give out information about crimes that occur against people in public places, although there can be a significant amount of work involved in finding out the exact locations.

Some communities do not feel that there is enough criminal activity to warrant this kind of search. Instead, they focus their audits on areas that make them feel unsafe or where a resident has identified a safety problem. Once again, this comes down to the conflict between the perception of safety and actual safety. On one hand, the areas that have been targeted for criminal activity should be audited, because they constitute a real threat to the community. On the other hand it could be argued that this type of information is not strictly necessary, since the audit, as originally conceived, is supposed to focus on areas

of perceived need, rather than on places where crime had actually occurred. Knowing the real crime statistics of an area could also have a calming effect on a community by clearing up public misconceptions about real criminal activities, which in turn may reduce the need for costly physical intervention.

For the Millrise audit it was difficult to obtain police statistics which showed the location of each personal crime in the community, although this information was obtained eventually through the perseverance of the audit team. For the Wildwood audit, similar crime statistics were desired and, again, proved difficult to obtain. In the end, only general statistics for Wildwood were available. This did not allow the audit participants to examine the areas in which criminal offenses had occurred, instead they had to rely on the areas which made them the least comfortable. It is not known whether other communities have made this effort to obtain police information prior to conducting their audits.

***Recommendation 6:** That a comprehensive crime analysis be conducted as part of the preliminary steps of the audit and that appropriate contacts be made within the Calgary Police Service to ensure that communities have access to available crime statistics and that the Police Service act cooperatively by assisting communities identify their problem areas.*

The Checklist: Audit Guides and Kits

As already noted, many cities across Canada have created safety audit guide books or kits. Most of these guides, such as Vancouver's, Edmonton's, Calgary's and Winnipeg's all are based on METRAC's work. In general, these guide books are quite useful. They outline the steps that an individual, group or organization should take in order to successfully conduct a safety audit. Each of these books includes a checklist or list of questions that audit participants use when they visit their audit sites. These checklists ensure that important aspects of the environment are examined and encourage participants to write down their observations so that they can later be included in the final report, as solutions or recommendations for improvement. These checklists are usually in the form of specific questions.

Other organizations have taken different approaches to the audit questions. Corrine Borbridge audited The University of Calgary's campus in 1993 and developed her own technique. She created a series of general, open ended questions, such as "Do you feel safe or unsafe using this space?" "What features make this area feel safe or unsafe?" and "What would you change in order to feel safer using this space?". These questions were asked in conjunction with a checklist which covered the general areas of lighting, landscaping, entrapment sites, isolation, sightlines, signage and other. For each of these areas the participants would circle "Good, Bad, Ugly or N/A". The open ended nature of these questions allowed participants to observe their environment and comment on it.

(Borbridge, not dated). These comments were later incorporated into the final recommendations.

Crime Prevention Through Environmental Design uses an evaluation technique that puts all the information on a “matrix”, which is essentially a table or grid. The CPTED Matrix has columns for the following elements: Location, Advantages, Disadvantages, Precautions and Recommendations. Figure 9 shows a typical CPTED Matrix.

Figure 9

CPTED Matrix				
Location	Advantages	Disadvantages	Precautions	Recommendations

Although there are a number of different checklists that an audit can use, all of them try to discover the same kind of information: what causes people to feel concerned in an area and what can be done to make the area feel safer. Each of these methods has strong and weak points.

One of the weak points of the checklist used by METRAC and later modified for the *Calgary Safety Audit Handbook* is that it contains questions that are leading. These questions may lead the participant to a certain answer. Examples of this type of problem are found in *Safety in the Suburbs: Millrise Safety Audit*. For example, one of the original METRAC questions asks “Can you clearly see what’s up ahead?” (METRAC, 1992) and then gives the participants options such as fences, bushes, hills, etc. Listing options such as these may lead the participants to feel obliged to answer that these objects block the view, even if they are not really a problem. This leads participants to answer in a way that they feel is expected, rather than using their own opinions. In the same manner, some of the questions on these checklists are restrictive in that they may prevent a participant from using her own judgment by inadvertently supplying the answer.

The checklist used by METRAC and other cities also assumes that the participants have some familiarity with the area. This is evident by questions such as “Can you predict the number of people that will be in this area at different time of day?” or “Can you predict a pedestrian’s movement?” On one hand, this type of familiarity is common when doing audits of communities or neighbourhoods. Most participants will be familiar with their own community. This type of familiarity, however, can also blind participants to problems that they do not see for the very reason that they are familiar with the area. For example, local residents often do not see the need for address or name signs in their neighbourhood parks, until it is pointed out that if an emergency did occur in one of those parks it would be difficult to let emergency personnel know where to go to.

A further problem with the existing checklists is that they sometimes try to be too all encompassing. The checklist often mixes up questions that pertain to outside areas, such as community parks and to interior areas, such as hallways. A further criticism is that the checklist should not try to address all types of areas. It makes the most sense to alter the checklist to suit the place in which it is being used.

In conducting the audit with a number of communities, it became evident that the language used in the checklist questions is very important. For example, words like “illuminate” and “natural surveillance” may not be easily understood by some participants.

A number of problems were identified pertaining to the different types of checklists used by municipalities and organizations. A few general comments can be made about checklist or audit questions that should be borne in mind by any organization or individual assembling a safety audit guide or kit.

Recommendation 7:

- A. Questions should not be leading. That is, the participants should not feel obliged to answer in a particular manner but should answer honestly.*
- B. The checklist must be either sufficiently general so that it can be used in any space (open ended questions), or sufficiently specific so that it makes sense to use it in a particular type of environment (for example indoors versus outdoors, suburban versus downtown)*
- C. The checklist should be written in a tone and manner appropriate for the audience.*

Audit Final Report

There appears to be some difficulty in the writing of audit final reports. The Millrise audit, because it was fulfilling requirements of a graduate level class project, was an extensive document; it included background information, police statistics, photographs and survey questions and results. Other Calgary communities, such as Wildwood and Marlborough Park have used a very concise and informative format. This format identifies the areas audited, the positive and negative aspects of the area, suggestions for improvement, potential people to contact for each recommendation, as well as possible

follow up steps. Other communities, such as Southwood, have used a grid or table format. This format is good up to a point. It is short and easily read, however it does not provide enough information to know exactly what the problems are in the area or what steps should be taken to rectify the problems. Other communities, such as Triwood and Haysboro, limited their final reports to short letters. The effectiveness of this format may be dependent on the types of improvements that are being sought and the recipient of the report. In Haysboro's case, the final report was received by the ward alderman, who subsequently directed her executive assistant to follow through with the recommendations by contacting the appropriate department. In this instance, the assistant was quite successful in getting many of the improvements made, however, the effectiveness of this method would be dependent on the alderman's commitment to the safety audit process and the industriousness of the office.

The need for some flexibility in format is obvious. Some communities may not conform to average standards, or one format may not suit the needs of all communities. For this reason, a community should be able to write their final report, if indeed they need one, in a manner that best suits them.

If the administration of a city chooses to promote or encourage community safety audits, it is recommended that a format for the final reports be designed which will allow communities to create consistent reporting. This is important if the audit reports will be sent to different city departments for action. If an agreed upon format can be created, it

would lessen confusion about expectations, both on the side of the community and of the departments.

Recommendation 8: *A minimum standard format for audit final reports should be established. This format should be easily read and understood by different city departments. A copy of this format should be included in the guide or kit that is distributed.*

Existing handbooks and guides on safety audits tell communities to contact the people or departments that can help them implement their recommendations. This, however, may not be sufficient information. Communities seem to need more guidance on who to turn to for help, and what steps need to be taken after the audit is completed.

Recommendation 9: *Expand section in handbook or guide that deals with steps that need to be done once the audit is completed. Create list of contact persons that can help a community implement its recommendations. Create more explicit description of the tasks that need to be done in order to follow up on recommendations.*

Types of Recommendations Made

The types of recommendations made in the safety audits in Calgary are readily identifiable. An increase in the lighting, the trimming back of bushes or other

landscaping alterations and the installation of better information signs are typical of the requests that communities made in response to conducting a safety audit.

During the information gathering stage of the Millrise project, the audit team interviewed a City Planner named Paul Maas. Maas held a very strong belief that cities should not be turned into well-lit concrete jungles. He insisted that some places are intrinsically unsafe, and this should be identified and people should be told not to go to these places at unsafe times. The example Maas used was the tree farm in Millrise. Prior to the Recreation Center's construction, this area seemed to be a potentially dangerous place. The trees could have been cut down, but this would have eliminated a place that people enjoyed in safety during the day. This was an example of a place that people should avoid if it made them uncomfortable. Many communities in Calgary have this sort of "low control" area, or a similar large, unlit green space.

Another element of this problem is that communities tend to insist that the problems in their communities must be solved by city departments instead of by the communities themselves. All the communities contacted by the safety audit coordinator were encouraged to come up with community based solutions. Some problems lent themselves more readily to community intervention, however most design changes, such as new lights, were expected to be dealt with by the city. As yet, no community other than Marlborough Park that I am aware of, has attempted to raise funds to pay for desired changes.

A related problem is the need for strong community consensus for both the process of safety audits and for the implementation of the recommendations. If the audit team identifies a problem that they want to see addressed, say the installation of new lights or the removal of certain bushes or hedges, there is no guarantee that the rest of the community is going to feel the same way. Some of the communities that have conducted audits in Calgary have already run into this problem. Wildwood, for example, identified the need for a massive clean out of underbrush from some of the neighborhood parks. Despite making every attempt to communicate why this was being done to community members, there was still a backlash by at some community residents who opposed the removal and trimming back of the bushes. Miller has attempted to pacify residents by explaining in the local newsletter the reason for the pruning, as well as negotiating some replanting in particularly barren areas. These new plantings should be of a type that will not cause a recurrence of the former problem.

Most of the recommendations that arise from safety audits conducted thus far in communities in Calgary focus on increasing lighting in neighborhood parks, alleys and other public spaces or trimming back or maintaining hedges and bushes. Some communities expressed concern with vandalism or with groups of youth hanging out in parks or near convenience stores or poor overall maintenance. Although these problems may seem minor, there is evidence to show that cleaning up “incivilities”, such as disorderly physical surroundings (litter, graffiti and unkempt lots) and disruptive social

behavior (drinking, rowdy youth and transients), are perhaps the biggest contributors to creating a perception of fear.

Fear in the urban environment is above all a fear of social disorder that may come to threaten the individual. I suggest that this fear results more from experiencing incivility than from direct experience with crime itself. Within areas of a city incivility and crime may in fact be empirically correlated. (Lagrange, Ferraro and Supancic 1992)

Another concern regularly brought up was a lack of signs and/ or emergency services information. As a result of these findings, the recommendations for improvement that arise from safety audits in Calgary are quite straight forward, such as more light standards, better signs or trimming back hedges.

Other, less tangible factors, may also come into play. The attitudes of many of the community associations that completed audits in 1995, was one of conservatism and practicality. Not including the request for additional lighting, which is very expensive, all of the requests that communities made seemed reasonable and possible to implement. This may be indicative of the relative safety of Calgary. Unlike some American cities, Calgary enjoys relatively few crime problems and does not have large tenements or slums.

Implementation of Recommendations

By far the area of the safety audit process that needs the most improvement is that of the implementation of the recommendations which arise from the safety audits.

Implementing the recommendations for a safety audit can be a frustrating and time consuming process, and requires time and resource commitments from the participants.

Conducting an audit can only truly be considered successful if there are changes made.

In *Safety Audit Tools and Housing: The State of the Art, and Implications for CMHC*, the only document reviewed by the author in which criticisms of safety audits were found, several limitations to safety audits were identified. One of these included,

great frustration about following up on safety audits and the less-than-optimal changes that have been achieved. While every survey respondent and interviewee did feel that their safety audits had led to change, many had found the process of advocating for changes difficult and almost all of them felt that more and different changes could have occurred.(1995).

This, obviously, is an area that needs to be examined in greater detail, especially by municipalities that decide to promote safety audits. This is also the area in which there is the least public information available. Frequently, audits are performed by individuals or organizations outside the municipal government and as a result, it is difficult to monitor or assess their progress.

At a micro level, a community safety audit may identify problems on individual land owner's property, such as the trimming back of a hedge. In these cases, the best approach is for the audit team to contact that individual, in person, to inform them of the audit

team's finding and ask them to attempt to fix the problem. If this does not work, and if the problem in contravening a city by-law, a by-law enforcement officer could be informed of the problem.

If the problem is at the community level, such as a need for more lights around the community hall, youth problems or a lack of information about areas or services, then the community association should be informed and involved in the solutions. In some cases, it may be necessary to do fundraising in order to pay for improvements. It is important for communities to be active in the improving of their communities. Safety audits are a community development tool and as such they should attempt to increase the quality of life in communities.

Recommendations for improvements that occur on city property, come under the jurisdiction of various city departments. In order to implement these recommendations, the community currently must:

- 1) contact the department and find the person responsible for authorizing an improvement,
- 2) convince that department that there is a problem,
- 3) wait while the department determines whether there is money and need and
- 4) if successful, wait for the work to be done.

This can be a long and tiresome process. This, however, is the process suggested by METRAC and can probably be used in any city. In cities that are making an active attempt to promote safety audits to their communities, however, it is not enough.

In many cases the audit team is unsure of how to go about contacting the correct city departments, or who to ask to get the changes done. During presentations to communities, residents often noted that when they had previously requested that a change be made by a city department, they were met with indifference and that the changes would not be made. Colleen Miller, from Wildwood, correctly identified the problem as being one of being able to make the correct contact within a department (Conversation January 22, 1995). She said that if you spoke to someone too junior in the department, that that person did not have enough authority to ensure that the changes would be made. If you spoke to someone too senior, they would pass it off to someone else with similar results. She characterized her success at getting recommendations implemented by being able to access the right people at the right time. In the case of the audit completed in the Fall of 1995, these coincided with the end of the budget years for city departments. Miller believes that some of the recommendations may have been followed up so quickly in an attempt to spend money in the budget prior to submitting the next year's budget.

There are many problems associated with the best way to get the recommendations of a safety audit introduced to city departments. The METRAC model relies on the audit team's ability to access the correct people and their ability to lobby, if necessary, to get

those changes made. In Edmonton, completed audits are given to the Citizen's Action Centre, who then make the contacts. The Citizen's Action Centre is a clearinghouse that directs resident's inquiries to the correct city department or official. The Action Committee Against Violence, in Calgary, attempted in part to act as a go-between for the communities and the city, but had not developed a formal process at the time of this report. In fact, in late January, the city of Calgary Planning and Building Department advertised for a one year position (January 1996) to be created that will examine the issue of implementing safety audit recommendations within the city of Calgary. Hopefully, this position will instruct city departments on how to manage recommendations coming from community safety audits and will create a set of protocols that will ensure that city departments are seriously considering audit recommendations. At the moment, the city's participation on safety audits is minimal or varies depending on the knowledge and interest level of department personnel. This new position should create a more formalized approach to reviewing recommendations flowing from audits.

Another solution to ensure that audit recommendations are taken seriously is to expand the role of the Urban Safety Work Group, or create a similar committee. The Urban Safety Work Group was formed to implement recommendations flowing from the Mayor's Task Force on Community and Family Violence (1991). The Work Group has implemented all of the recommendations that it was originally charged with, and now almost solely focuses on reviewing the safety audit process and keeping track of the numbers of audits that are being completed. The recommendation is to change this

committee's mandate and membership. The committee, given its new focus, should be reconstructed to include members from city departments such as Parks and Recreation, Electric, Transportation, Social Services, Planning and Building and Calgary Transit. This committee would meet on an as-needed basis to review the final reports of each audit that is completed by a Calgary community. The committee would assess the relative importance of improvements, both within the community and among different communities. Communities would be able to attend the meetings, in which their audits were being discussed. It would be necessary to develop criteria for this type of assessment. Obviously, the need of the community would have to be balanced with the cost of the improvements. The members of this committee would be responsible for taking the recommendations back to their departments for possible implementation. In the case of many improvements, such as lighting, there would be budget and regulation implications that would have to be addressed. The community that had conducted the audit would then have one key contact, i.e. the members of the committee, in each department, who they could approach and ask questions, or find out about the status of the improvement. If improvements were not feasible to put into place in the short term, there would be the opportunity to put them in a longer term plan.

Recommendation 10: *That the Urban Safety Work Group, or a similar committee, be created composed of representative members of different city departments. This committee would be responsible for reviewing audit recommendations and attempting to implement them.*

This committee would have the difficult task of determining which recommendations are more important and which ones will be the first to be implemented. If audits are going to be sanctioned by municipalities, then the city must create a method of determining which community's recommendations take precedence and which recommendations take place within each community

Recommendation 11: Establish a method of prioritizing problem areas within each community and between communities.

The lack of civic involvement in the audits conducted in Calgary has not gone unnoticed. The City Planning Department has been involved only in audits in communities that are undergoing an Area Redevelopment Plan. In these cases, the audit is seen as one method of including public participation in the planning process. However the attitude of the City Planning department, as presented by a representative on the Urban Safety Work Group, is that the Planning Department does not have the time or resources to participate in community safety audits. This attitude is distressing, because these are planning issues, and if the City Planning department is not willing to participate, it shows a lack of faith on their part, to a process they profess to believe in.

Likewise, the Calgary Police Service has not played a significant role in community safety audits. In many cases, police have been accommodating in supplying information and facts, and they are more than willing to speak to communities about programs such as PACTS or Block Watch, which has benefited these communities. In the second part of

the Wildwood audit a police constable attended the walk around. The community reported that his presence gave them a sense of validation; he agreed with their findings and this made the participants feel better about their efforts. If more communities could engage the services of the police it would also result in better communication between the police in that district and the community, which in turn would result in better policing.

Community Development

A successful safety audit incorporates many aspects of community development. The community should report an increase in community involvement, better understanding of the issues and concerns of the residents and should benefit the community, especially those who feel marginalized. Community audits that do not include some of these positive aspects of community development may result in physical changes being made, but may not have much affect on the quality of life of the resident.

There are a number of ways to ensure that safety audits are used most effectively. The safety audit must be seen as an ongoing process, not a one night event. Many participants are involved only in the walk around, and this participation has limited ability to empower. Participants should be encouraged to be involved in many aspects of the audit, such as writing and reviewing the final report, contacting media, contacting politicians, city departments or the individuals responsible for making the changes. In some of the

audits in Calgary, most notably Wildwood and Malborough Park, the safety audit created the catalyst for residents to join community programs such as Citizens Watch, Block Watch or the community association.

To help with community development, safety audit organizers should make every effort to encourage participation of the marginalized within the community. Elderly, disabled and other vulnerable groups should also be included. The added benefit to including the vulnerable in an audit is that they may begin to feel safer in the community, and thereby become more active members of the community. The survey from the Women's Action Centre Against Violence indicates that, "the leadership and work necessary for a successful audit has most often been provided by women" (1995), which is another important reason to include women in the safety audit process.

One caution should be raised. Safety audit organizers must be careful not to create fear while conducting the audit. Many people will have a heightened awareness of safety, after participating in an audit, and this may increase their fear level. Audit organizers should make participants aware of the real risks and encourage them to call and discuss their fears, anytime after the audit had been completed. In most cases, however, participating in an audit increases feelings of empowerment because participants understand why they were previously uncomfortable in an area and they can now name what it is that makes them feel unsafe.

Another important community development aspect of safety audits is focusing on the positive aspects of the community and not only the negatives. The strengths and opportunities of the community should be emphasized, so that they can be repeated and built upon. The community should be alerted that a safety audit will not solve all their safety problems. Audits should also focus on the management and use of space, as well as the social programs that are in place. Programs such as Block Watch, Citizen's Watch, Teen Drop -In programs, stop request for buses, car pooling and community associations among others, are all programs that should be considered by audit teams as ways to improve the community as a whole.

***Recommendation 12:** Safety Audit organizers would benefit from some knowledge of community development techniques and tools, in order to make the audit as successful as possible.*

Evaluation of Safety Audits

The literature search for this topic revealed no clear cut way to measure the success and effectiveness of safety audits. There has been no comprehensive evaluation done of safety audits across the country. Criteria and methods for evaluating the success and effectiveness should be developed. This will be a difficult undertaking as many communities have not even kept track of which of the recommendations have been implemented and which have not been. It is necessary to create a base line of data so that

communities can be compared before and after an audit has been conducted to determine if the audit has had a positive effect.

Recommendation 13: *Develop criteria and methods to evaluate the success and effectiveness of safety audits across the country.*

Conclusions

Community safety audits are an extension of crime prevention through environmental design, which focus on the perception of safety (often from a woman or child's point of view) by a close examination of the physical environment in a community. The end result of a safety audit is to make recommendations, and then implement them, that will make the area a safer place for the normal users of the community. There have been quite a number of audits conducted across the country and there are a number of existing guides or kits to help communities conduct an audit. There is, however, little critical analysis of the audit process and few evaluations of the successfulness of individual audits or groups of audits.

The use of safety audits in communities has been evolving. Ever since safety audits successfully helped alleviate concerns in Hyde Park in Toronto, the concept has been spreading across the country. Safety audits began as a reaction against crime, were seen to be successful and grew into a popular trend. They are now slowly becoming institutionalized, as police, civic officials, community planners and community developers realize their potential. Safety audits are still in an early phase of institutionalization. As more and more municipalities decide to conduct safety audits as part of their official business, for example as part of Area Redevelopment Plans, then the form and method may be altered. Parts of the process may be changed to better suit requirements of the city or planning department. Safety audits, as described here, are still

growing and changing as municipalities go through the learning curve associated with any new endeavor. More critical analysis of the costs and benefits needs to be done. The recommendations presented in Chapter Five are intended to help municipalities improve on the existing process.

A properly conducted audit can have a number of benefits for a community. It can provide information needed to determine what it is about an area that makes it unsafe, or perceived to be unsafe. Once this is determined physical changes can be made to make the area safer. If the area is dramatically improved, the community residents will feel safer and will use the area more often, contributing to a better overall quality of life in the community. Spin offs to the audit process include community development work that may emphasize the strengths of the community and may encourage residents to become more involved in their communities.

The audit process, however, is far from perfect. This project has suggested changes to the audit process for municipalities that choose to encourage the use of audits in their communities. Suggestions include creating consistent guidelines for communities to use when conducting and reporting audit findings, as well as providing professional assistance to communities who conduct audits. A municipality that wants to encourage safety audits must have the full cooperation of all of its various departments, such as the Police, Planning Departments, Electric Departments, Transportation and Parks and Recreation. The lack of involvement by these departments in the audits that have been

conducted in Calgary is distressing. In most cases, they are involved only once a request for changes have been made, instead of during earlier steps. If city departments were more committed to the safety audit process, they may be more sympathetic towards the changes that the communities are proposing. The audit process should remain true to METRAC's original intention to make communities safer for women, children and the elderly because these are the groups in society most likely to feel the effects of fear, even if they are not the groups most often victimized by crime.

Of course, there are cost implications associated with the expectation that audit recommendations will be implemented. If a community conducts an audit and determines that there is a need for physical design changes, such as landscaping or increased lighting, the cost for these changes can be quite prohibitive. In municipalities that are encouraging the use of audits, such as Calgary and Edmonton, residents are going to expect that the city is willing to put some capital into these improvements. In Calgary in 1996, \$60,000 was granted by City Council to address safety audit issues. The City Planning and Building Department decided to use two thirds of this money to create a one year contract position. This person is creating protocols for city departments to follow when they receive a final audit report. Some community residents are very cynical about the decision to spent money in this manner. They would prefer it if the money was allocated to communities, so that improvements could actually be funded.

A second financial problem with institutionalized safety audits is how to determine which community, or which recommendations, has priority. The way that audits are currently dealt with in the City of Calgary is on a first come, first served basis. As communities complete their audits, they approach various departments requesting improvements or advice. Using this process, a community that approaches a department at the right time (such as early in the year or right at budget time) may have a better chance at getting their recommendation implemented than another community. The current process does not include any form of evaluation based on need or priority. Although communities are asked to rank order the recommendations within their own communities, there is no third party group that does the same for recommendations coming from different communities.

And, although it may be necessary for some city funding in order to implement recommendations, communities must be encouraged to take control of their own problems. In some communities, fundraising initiatives have raised the money needed to install and maintain extra light standards. Safety audits, as a community development tool, can be used as a catalyst to spark a community into working together to find its own solutions.

As a catalyst, safety audits can be an effective community development tool. Properly organized and conducted, a safety audit can have many benefits for a community. If recommendations are appropriate they can create a safer environment which will allow residents to take full advantage of their community. They can help inform residents about the real and perceived dangers in their community. And they can bring community

members together to improve their quality of life. In a time when actual crime statistics are decreasing but the perception of the average citizen is that crime is increasing, safety audits are one tool which may help alleviate concerns about personal safety.

Appendix A: The Questionnaire and the Results

Distributed in Millrise³

Question 1 was a chart that contains eight locations where each person was asked to rate their perceptions of safety for each location on a scale of one to five. (one representing unsafe and five representing safe) The result can be seen on the attached bar graphs which outline the breakdown of responses for each area surveyed. The scale on the bottom of the graphs represents the rating scale from one to five and a “N/A” category for questionnaires with unanswered questions. The number above each bar indicates the number of people that gave that area the rating outlined below. These graphs are useful to indicate a general feeling of safety for each area. The graph for “Your Home” represents an overall feeling of a safe rating, as most responses fell on the right side of the graph (safe ratings).

Compared to the graph of the “Farmer’s Field” it can be seen that the graph for the farmer’s field has a very even curve and therefore a more even distribution (neither safe or unsafe). Answers from question one indicate that most residents feel very safe in their home and on their street. The perception of safety appears to decrease as a person travel further from their home or neighborhood. An example of an area that is considered less

³ From *Safety in the Suburbs: Millrise Safety Audit* by Mayja Embleton and Graeme Fuller.

safe would be the eastern boundary of the community. This is a commercial area consisting of a storage area, an abandoned building, a feed lot and open fields. Although this area received a lower rating in terms of perceived safety, it still received an average distribution of results from those surveyed.

Other interesting trends were observed in the data from question one. People who had been victims of crime generally had a lower feeling of safety in the community. This appears to be related to the fact that people who mentioned they were victims of crime rated all areas much lower compared to people who had not been affected by crime. Another interesting result was that men had a much higher perception of safety than women who answered the questions.

APPENDIX B

SUMMARY OF RESULTS OF QUESTIONNAIRE

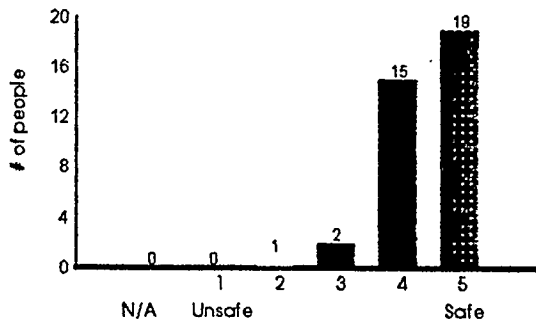
Question 1 was a chart that contains eight locations where each person was asked to rate their perception of safety for each location on a scale from one to five. (one representing unsafe and five representing safe) The results can be seen on the attached bar graphs which outline the breakdown of responses for each area surveyed. The scale on the bottom of the graphs represents the rating scale from one to five and a "N/A" category for questionnaires with unanswered questions. The number above each bar indicates the number of people that gave that area the rating outlined below. These graphs are useful to indicate a general feeling of safety for each area. The graph for "Your Home" represents an overall feeling of a safe rating, as most responses fell on the right side of the graph (safe ratings).

Compared to the graph of the "Farmer's Field" it can be seen that the graph for the farmer's field has a very even curve and therefore a more even distribution (neither safe or unsafe). Answers from question one indicate that most residents feel very safe in their home and on their street. The perception of safety appears to decrease as a person travels further from their home or neighborhood. An example of an area that is considered less safe would be the eastern boundary of the community. This is a commercial area consisting of a storage area, an abandoned building, a feed lot and open field areas. Although this area received a lower rating in terms of perceived safety, it still received an average distribution of results from those surveyed.

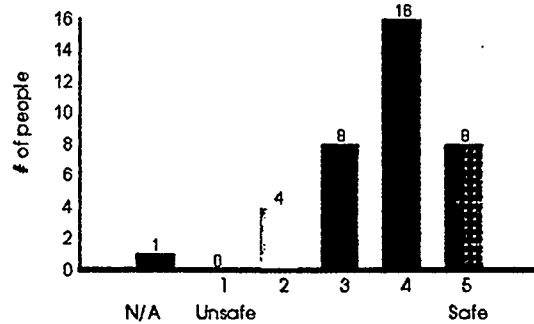
Other interesting trends were observed in the data from question one. People who had been victims of crime generally had a lower feeling of safety in the community. This appears to be related to the fact that people who mentioned they were victims of crime, rated all areas much lower (or unsafe) compared to people who had not been affected by any crimes. Another interesting result was that men had a much higher perception of safety than women who answered the questions. This appears to be due to the fact that studies have shown that people who are victims of personal crime are those in society who are who are more

vulnerable and may include groups such as women, the elderly, children and the handicapped.

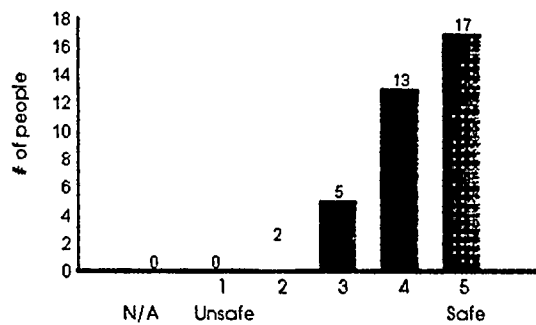
YOUR HOME



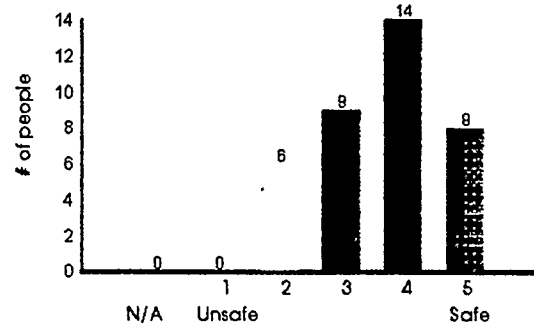
CLOSEST PLAYING FIELD



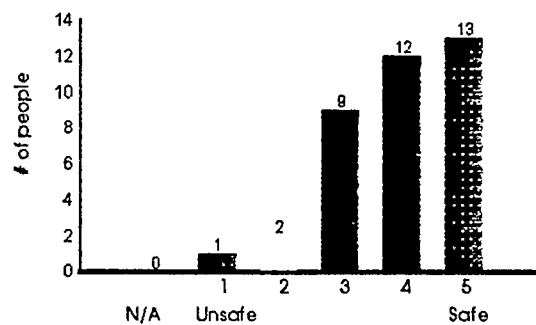
YOUR STREET



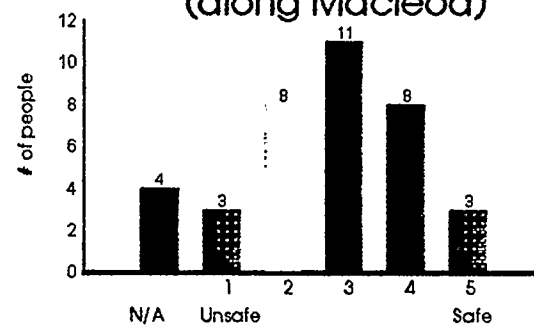
STRIP MALL / GAS STATION



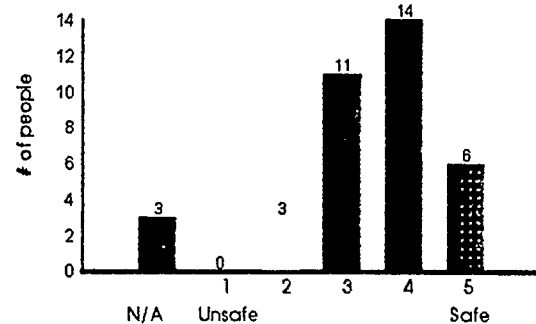
CLOSEST PARK



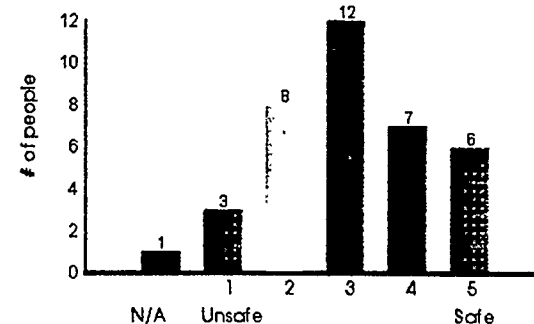
EAST BOUNDARY (along Macleod)



SCHOOL YARD UNDER CONSTRUCTION



FARMER'S FIELD (west border)



Question #2:

Does your street feel uncomfortable or isolated?

Total responses 32 NO 5 YES

There were a small number of respondents who answered yes to this question. The comments included the feeling that in the evening there is a feeling of emptiness in areas of the community. This feeling or perception is correlated with the fact that some street lights tend to "burn out" or are simply out (without power) for a period of time. In some cases it takes a few weeks to have the problem fixed and light returned to these areas. Changes mentioned to improve the feeling of emptiness were to decrease the amount of time taken to restore street lights in areas of the community without light. Prompt and efficient service is desired to repair the problem of area "black outs". Some other responses include adding effective lighting in areas where it appears very dark. Such areas were examined in detail as part of the safety audit walks and will be outlined in the safety audit walk checklists in the final report.

Question #3

Do you feel the lighting on your street to be adequate?

Total responses: 1 NO 36 YES

Only one respondent felt that the lighting could be improved on their street. The general feeling for this question was that lighting was adequate on their street but there was a problem with blackouts in areas of Millrise. An area was identified between Millside Drive and Millcrest Road where the street lights have gone out "for weeks at a time" and that this occurred three or four times in the last six months. An improvement mentioned to improve this situation was for the response time in repairing lighting problems to be quick and efficient.

Question #4

Do you find that the information or directional signs on you street are adequate?

Total responses: 4 NO 33 YES

Four people of the thirty seven answered "no" to this question which indicates that most people are satisfied with the signs found on their street. Comments from the people that answered "no" to this question included placing a stop sign at an intersection, adding speed bumps in a playground zone and increasing the size of street signs on street corners.

Question #5

Is the view down your street unobstructed?

Totals responses: 6 NO 31 YES

The majority of people felt that the view on their street was unobstructed with only six people who answered "no". Comments included that in winter people parked their Recreational Vehicles in the front of their property which obstructed the respondents view of their children playing in front yards or riding bicycles on the street. Similarly, large trucks parked on the street next to the curb also obstruct the view of parents watching their children playing in front of homes. Other comments included curves in the design of the streets impaired the view of oncoming cars.

Question #6

Could you be heard by someone else on your street if you called for help?

Total responses: 3 NO 34 YES

Almost all respondents answered "yes" to this question and only three answered "no". There are a number of mothers with small children who are home during the day. Depending on the weather and temperature (for example if the windows are closed during the winter), most residents felt that their neighbors would hear a call for help and would either call for help (911) or offer assistance.

Question #7

Are there any places a person could hide on your street?

Totals of survey: 18 NO 19 YES

There were both general and specific locations identified in this question. Some of the general locations identified where a person could hide included: alleys, backyards, between houses, behind fences, behind hedges and near super mail boxes. Specific areas that were identified were: the tree farm , the pathway entering the tot lot area, the parking lot of St. Patrick's Church and the Shawnee Golf course which is near the community.

Recommendations included improving lighting near super mailboxes (which would have to be done on an individual basis), keeping hedges trimmed and increasing lighting in some areas. Comments identifying improvements for specific locations included adding lights and a pathway through the tree farm , constructing fences around the golf course and improving lighting in the parking lot of St. Patrick's Church.

Question #8

Are there any places a person could be trapped?

Total responses: 22 NO 15 YES

The areas identified in this question also varied from the general to the very specific. General locations identified where a person could be trapped included in fenced yards, between houses and in back alleys. The specific areas identified included more than one reference to the two pathways that lead to the tot lot area near Millview drive and 100/200 block of Millview courts. The pathways have lights but the park area has no lights and there are places a person could hide. The concern for the pathways as entrapment sites may be due to the six foot high fences on each side of the pathways. Two people could easily trap an individual if each person stood at the opposite ends of the pathway. The individual in the pathway would not have an alternate route to escape. The tree farm was another area of concern mentioned by residents because this location is very dark at night and there are depression areas from excavated trees and coniferous trees that would make excellent hiding spots.

Question #9

How easy would it be for an offender to disappear on your street?

Total responses: 22 EASY 15 DIFFICULT

Most people felt that if an offender wanted to disappear in the community it would be a relatively easy task to accomplish. Areas surrounding the community that make an excellent escape route include the farmer's field to the west of the community, the golf course to the north of Millrise that leads to Fish Creek Park and MacLeod Trail on the eastern boundary. Many respondents mentioned if an offender was traveling on foot escape from capture would be relatively easy. Possible escape routes included cutting through back yards and alleys until the offender traveled far enough away from the location where the crime occurred to successfully escape.

Question #10

Is there an area on your street that makes you feel unsafe? Where and why?

Locations identified in this question:

- Tree farm : due to poor lighting
- Old food barn (abandoned building) - poor lighting and isolated
- playgrounds (dark)
- by mailboxes at night (mail boxes near open fields)

Questions concerning the community as a whole

Question #11

Generally, do you find the lighting to be adequate?

Total responses: 2 NO 35 YES

Areas identified in this question were the Tree farm and Millrise Drive on the east side of the street. (commercial area consisting of the abandoned building, open lots, self storage area, and the feed lot)

Question #12

Do you find that the information or directional signs in the community are adequate?

Total responses: 2 NO 35 YES

The responses of the two "no" answers included that the street signs at the corners of the street are too small and cannot be seen while driving.

Question #13

Generally, are the views down streets or into parks unobstructed?

Total responses: 2 NO 35 YES

Most people felt the streets in the community were unobstructed. One person felt that the tree farm was a problem and another mentioned the problem of Recreational Vehicles parked in the front of homes that obstructed their view of the street.

Question #14

Do parts of the community ever feel uncomfortable or isolated?

Total responses: 24 NO 13 YES

This question was quite useful in identifying areas to conduct our safety audit walks.

Specific areas identified were:

- the Tree farm
- St. Patrick's Church parking lot
- Strip mall
- Farmer's field (west of community)
- Tot lot (between Millview Drive and 100/200 Millview court)
- abandoned building (old food barn - near MacLeod Trail)

Comments included some changes to these areas that would improve the feeling of isolation but more specific solutions will be discussed in the safety audit walks.

Question #15

Could you be heard by someone else in the community if you called for help?

Total responses: 6 NO 31 YES

Most people were quite confident that if they were in trouble and they called for help that someone from the community would offer assistance after hearing their calls for help. The opinion expressed was that either the police would be called or residents would come out into the street to see what the problem was.

Question #16

Are there any places or areas where a person could be trapped?

Total responses: 18 NO 19 YES

Areas identified in this question were similar to those identified in question fourteen. These comments were also useful in identifying areas for safety audit walks. General areas identified included: people may hide in alleys, behind decorative walls and fences and in back yards. More specific locations included the tree farm , abandoned building (old food barn), behind the strip mall, in farmer's field west of the community and in the Shawnee Slopes Golf course which is north of the community.

Question #17

Are there places or areas where a person could be trapped?

Total responses: 10 NO 14 YES 13 UNANSWERED

The response to this question was similar to other answers as it identified specific and general locations where a person could be trapped in Millrise. The general responses included between homes, along fences and in allies. The specific locations identified in this question had been identified in previous questions. These locations are the old food barn (abandoned building), the walkway into the tot lot, the tree farm and school under construction.

Question #18

How easy would it be for an offender to disappear in the community?

Total responses: 21 NO 16 YES

The responses to this question had repeated areas identified in other questions. If an offender was escaping on foot ,possible routes out of the community identified by residents were through back yards and allies. There was some concern that Shawnee slopes golf course was very close to Millrise because it is an excellent escape route to fish creek park .

Question #19

Is there a particular area in the community that makes you feel unsafe?

Areas identified:

- tree farm
- farmer's field (west of Millrise)
- old food barn(abandoned building)
- strip mall and surrounding field

Outside Millrise:

- Shawnee slopes golf course
- Peace Lutheran parking lot
- Fish Creek Park

Question #20

Other comments regarding safety in Millrise.

- Do not develop any more strip malls in Millrise
- I refuse to walk alone at night
- Tree farm is dark and isolated at night
- Becoming a member of Block Watch has increased my awareness of home and neighbourhood safety
- Appears to be a lack of police presence
- People speed through playground zones
- Bus stops dark at night

Appendix B: Typical Community Design

Problems

This appendix is intended to aid planners, landscape architects, community organizations and individuals by suggesting what constitutes good physical design for commonly held public spaces. In this appendix, suggestions will be made on what types of designs should be avoided and encouraged. The creation of city planning design guidelines based upon crime prevention through environmental design concepts is beginning to gather momentum in some Canadian cities. Vancouver's Safer City Task Force devotes an entire chapter to developing the concept of defensible space in that city, by creating design guidelines that will help create a safer living environment. This appendix is not intended to be the definitive word on urban design, but is meant to reflect observations I made as the Safety Audit Coordinator. For more detailed information on the topic of urban design, there are many resources that a person may turn to.

Lighting in Community Parks

Almost all of the community audits conducted in Calgary identify increased lighting as a priority for their community. The issue of lighting is a difficult one. In city parks, the responsibility of ensuring that the lightning levels are appropriate is under Park and Recreation's jurisdiction. Parks and Recreation, however, contracts the installation and maintain of light to either the Electric Department or to other agencies. The City of

Calgary's Electric Department must abide by rules and regulations about what type, and how many, lights are allowable for any given area. Lighting is also very expensive, which is why it should be well thought out in the early design stages. If a path is intended to be used at night, the lights should be at a minimum standard of 0.4 foot-candles (Planning and Development Department Staff and Gerda Wekerle, 1992). Care must be taken to ensure that the lighting is consistent, in order to reduce shadows created by pools of light and darkness. Places that are not intended to be used at night perhaps should not be lit. A lit park or pathway may be an invitation for someone to walk into a dangerous or secluded area (Leicestershire City Council, date unknown).

Lighting Around Community Halls

In general, lighting around community halls is good, but can use improvement. Care must be taken to light the entrances and rear of the community halls. This will prevent vandalism and discourage youth from hanging out around the building after hours. Many community hall parking lots are not sufficiently lit. This can be a problem in winter, when the sun sets early and programs such as scouts, requires people to park in poorly lit areas.

Street Lights and Alleys

Lighting standards for streets and alleys are set by the City's electrical system. There are many rules and regulations that the department follows to ensure consistent and adequate

lighting. Overall, the lighting on community streets in Calgary is good. In places where the lights do not seem adequate, there is often an interfering factor, such as overhanging trees. Alleyways in Calgary are not consistently lit and can create problems for some residents. The Electrical System has created a rental light agreement in which up to six residents can pay the cost of a new light, approximately \$2.00 extra on their electrical bill a month. The Department supplies the light standard, but the residents pay for the extra electricity. This, and other alternative light providing programs, need to be further explored.

Pedestrian Movement

The movement of pedestrians through an area should be carefully considered. If the development is new, retain any existing paths through the areas, as these indicate the desired paths of pedestrians (Leicestershire, not dated). Footpaths should be limited in number, thus reducing illegitimate users such as thieves or vandals. Pathways should provide the shortest, most direct and safest route through an area. Needless to say, paths should be well lit, with lighting positioned to give the greatest amount of illumination, especially at human height.

Wherever possible, paths should be placed so that natural surveillance is enhanced. In many Calgary communities, this means placing the pathways so that there is the possibility of a person looking into the park through a residential window. If it is not

possible to have homes creating surveillance of a path, then position the path so that passing motorists can see onto the path. The view down the path should not be obstructed by fences, bushes or other obstacles.

Signs

The audits conducted in communities in Calgary revealed that there is a lack of proper signs in many public places in Calgary. Parks are not identified either by name or by street address, which makes identifying the area difficult in case of an emergency. Signs indicating when a park is officially open or closed or whether dogs are permitted or not are not consistent and if they are posted, are not necessarily in the most appropriate places.

Traffic Speed

Traffic speed, especially in playground zones or alleys, was a concern identified by several communities. Discussions with the Calgary Transportation department have revealed a number of initiatives that communities can undertake to try to improve this problem. The Transportation Department will lend communities signs that read “This is a Residential Zone” “Watch Your speed” and “Radar patrolled”. These signs are posted near the road and are intended to alert drivers to the appropriate speed limit. These signs are lent to communities for a number of weeks. A similar program allows communities to set up a radar detector and a sign that posts drivers’ speeds as they drive past. The

legal speed of the area is posted both before and after the radar so that the driver will know if she has exceeded the limit (Transportation Department, not dated). Another program allows communities to have a police officer radar the speeders and, instead of a ticket, the offender is required to take a pamphlet or hear a lecture by a local parent, about the importance of not speeding, in order to protect the community's children. These are quite new and innovative techniques for reducing speed. Unfortunately they are not permanent, and once the signs are removed, speeding may increase again. Some traffic studies in communities have shown that most speeders inside of communities are residents, and not drivers cutting through the neighbourhood.

Fences and Barriers

Public fences and other barriers often create places that can be used as potential hiding places. Whenever possible, fences should be of an open or trellis style, allowing a pedestrian to see through it, but still providing privacy or security. The Calgary Police CPTED Unit is quick to point out the problems created when a business or housing unit surrounds its commercial sized garbage containers in small, hut like structures. These areas can become potential hiding or entrapment sites. The Calgary Police prefer that these bins be hidden only on two or three sides, and the walls should not solid all the way to the ground. This allows police cars, in the event of an emergency, to drive up to the structure and rapidly assess whether or not someone is using the bin as a hiding place.

Social Programs

Although not a physical design problem, the creation of effective social programs can be very important to community development and community safety. There are a number of different programs that focus on people watching out for people, or natural surveillance, a key element of crime prevention through environmental design. These programs include Block Watch, Citizen's Watch, Radio Watch and Block Parent.

Other new and innovative programs are being tried by city organizations such as the "Stop Request" program ran by Calgary Transit. This service allows transit riders to ask the bus driver to stop any where along the route, after nine PM, if the rider is apprehensive about getting off at the regular stop. The University of Calgary has created a Safe Walk program. In this program, volunteers walk students to their cars, bus stops or C-train station after dark. Similar programs could be created if community associations wanted to run classes or events after dark, in their community halls.

Safety Audits should be conducted in conjunction with a wide variety of other crime prevention techniques. For example, residents must be aware of personal home security and should ensure that their home conforms to standards of residential security (O'Block, Donnermeyer and Doeren, 1991). Community policing is becoming increasingly familiar across Canada, and there are six community police stations in Calgary. The police should be consulted whenever serious concerns arise in a neighbourhood.

Programs aimed at youth and children are also effective in contributing to crime prevention. Children can be made “street proof” through a variety of programs and individuals can increase their own sense of security by taking course on how to prevent being attack or what to do if you are attacked. Formal training should be combined with common sense of avoiding dangerous situations, being alert and not flaunting one’s wealth.

References

Books and Articles

Atlas, Randall. (1991) "The Other Side of CPTED" in *Architecture and Security*.
March.

Bell, Wendy. (1991) "The Role of Urban Design in Crime Prevention: Adelaide City a
Case Study". in *Australia Planner*. Australia.

Brown, Barbara B. and Irwin Altman. (1983) "Territoriality: Defensible Space and
Residential Burglary: An Environmental Analysis" in *Journal of Environmental
Psychology*. Academic Press Inc. London.

Cooper, Merrill, Corrine Younie, Pip Farrar and Lindsay Guyn. (1995) *Breaking the
Barriers: A study of personal safety issues for women with using public
transportation*. Women Looking Forward, Calgary, Alberta.

Crowe, Timothy D. (Not dated) *Crime Prevention Through Environmental Design:
Basic Training Manual*. University of Louisville, NCPI.

Crowe, Timothy D. *CPTED Broward County Schools Demonstration*. The University of
Louisville, NCPI.

Crowe, Timothy D. and Diane Zahn (1994) "Crime Prevention Through Environmental
Design" in *Land Development*. Fall.

-
- Crowe, Timothy D. (Not dated) *Crime Prevention Through Environmental Design (CPTED): Malls and Shopping Centers*. Louisville, Kentucky.
- Crowe, Timothy D. (1990) "Designing Safer Schools" in *School Safety*, Fall.
- Crowe, Timothy D. (1988) "An Ounce of Prevention: A New Role for Law Enforcement" in *FBI Law Enforcement Bulletin*. October.
- Crowe, Timothy D. (1988) "Retail Security II: Design and Planning" in *ISR*, May/June.
- Crowe, Timothy D. (1994) "Understanding CPTED" in *Planning Commissioner's Journal*. Number 16, Fall.
- Embleton, Mayja (1995) "Community Safety Audits" in Plan Canada. Canadian Institute of Planners, Ottawa, Canada.
- Embleton, Mayja and Graeme Fuller. (1993) *Safety in the Suburbs: Millrise Community Safety Audit*. Urban Safety Work Group, the Action Committee Against Violence. Calgary, Alberta.
- Felsenthal, Sandy. (1995) "15 Ways to Fix the Suburbs" in *Newsweek*, March. New York, New York.
- Hodge, Gerald. (1991) *Planning Canadian Communities: An Introduction to the Principles, Practice and Participants*. Nelson Canada, Scarborough, Ontario.
- Jacobs, Jane. (1961) *The Death and Life of Great American Cities*. Vintage/Random House, New York.
-

-
- Jeffery, R.C. (1971) *Crime Prevention Through Environmental Design*. Sage Publications, Beverly Hills.
- Jones, Bernie (Not dated) *One Way to Neighborhood Deterioration?* The University of Colorado at Denver.
- Lagrange, Randy, Kenneth Ferraro and Michael Supancic. (1992) "Perceived Risk and Fear of Crime: Role of Social and Physical Incivilities" in *Journal of Research in crime and Delinquency*. Sage Publications, Inc.
- Leicestershire City Council. (Not dated) *Crime Prevention by Planning and Design*. Leicestershire City Council, Leicestershire, Great Britain.
- Keane, C. (1992) "Fear of Crime in Canada: An Examination of Concrete and Formless Fear of Victimization" in *Canadian Journal of Criminology*.
- Kretzmann, John and John McKnight *Building Communities from the Inside Out*. Center for Urban Affairs and Policy Reserach, Northwestern University. Evanston, Illinois
- MacLaurin, Bruce, Dora Bundgaard and Glenn Lyons (1992) *Downtown Calgary 2020 Crime Prevention in the Heart of the City*. The Calgary Business revitalization Zone Association. Calgary, Alberta.
- McKay, Constable T. (1992) *A Crime Prevention Through Environmental Design Study of the Turner-Fenton Secondary School*. Peel Regional Police, Ontario.
- Moore, Mark and Robert Trojanowicz. (1988) "Policing and Fear of Crime" in *Perspectives on Policing*. National Institute of Justice, US Department of Justice, and the Program in Criminal Justice Policy and Management, John F. Kennedy of Government, Harvard University.
-
-

METRAC (1992) *Women's Safety Audit Guide*. METRAC. Toronto, Ontario.

METRAC (1991) *Developing a Safe Urban Environment for Women*. METRAC, Toronto.

METRAC and Council of Ontario Universities Committee on the Status of Women.
(1991) *Women's Campus Safety Audit Guide*. METRAC/COU. Toronto, Ontario.

NACRO (1974) *Architecture, Planning and Urban Crime*. Published by NACRO, Great Britain.

Nagy, Sasha. (1995) "Communities Take Action for Safety" in *The Calgary Herald Neighbors*, July 27-August 2. The Calgary Herald, Calgary, Alberta.

Newman, Oscar (1972) *Defensible Space*. The Macmillan Company, New York.

O'Block, Robert, Joseph Donnermeyer and Stephan Doeren (1991) *Security and Crime Prevention*. Second Edition. Butterworth-Heinemann. Stoneham, Massachusetts.

Plaster, Sherry and Stan Carter (1993) *Planning for Prevention: Sarasota, Florida's Approach to Crime Prevention Through Environmental Design*. State of Florida Criminal Justice Executive Institute, Florida.

Post, Nadine M. (1995) "More Than Merely Cops and Robbers" in *ENR* May 1.

Sacco, Vincent. (1995) "Fear and Personal Safety" in *Juristat*. Canadian Centre for Justice Statistics, Minister of Industry, Science and Technology. Ottawa, Canada.

Saville, Gregory (1994) *Innovation in Urban Design: Using the Tactics of Situational Crime Prevention*. Prepared for Habitat '94. Edmonton, Alberta.

Small, Doug (1992) "Safety in Numbers" in *Canadian Living*. October.

Smith, Rick, Joseph Hornrick, Peter Copple and Jim Graham. (1995) *Community Resource Committee: A Community-Based Strategy for Dealing with Youth Crime and Violence in Calgary*. Calgary Police Service and Solicitor General Canada, Calgary, Alberta.

Smith, Ronald, Lorne Bertrand, Bruce Arnold and Joseph Hornick. (1995) *A Study of the Level and Nature of Youth Crime and Violence in Calgary*. Calgary Police Service and Solicitor General Canada. Calgary, Alberta.

Stanley, Paul (1976) *Crime Prevention Through Environmental Design: A Review*. Solicitor General of Canada. Toronto Ontario.

Stewart, Monte (1995) "Widespread Fear Detected in Survey" in *The Calgary Herald*. November 9, 1995. Calgary, Alberta.

Solicitor General Canada (1990) *A Vision of the Future of Policing in Canada: Police-Challenge 2000: Discussion Paper*. Ottawa, Canada.

Swartz, Robert D. (1985) "Mitigating Through Traffic in Residential Areas: Issues and Perspectives" in *Transportation Quarterly*. Eno Foundation for Transportation Inc. West port Connecticut

Toronto Transit Commission/ METRAC/ Metropolitan Toronto Police Force (Not Dated) *Moving Forward Making Transit Safer For Women*. Toronto, Ontario.

-
- Vancouver Safer City Task Force. (1993) *Final Report: Safer City Task Force*. City Clerk's Office, Vancouver, British Columbia.
- Washnis, George. (1976) *Citizen Involvement in Crime Prevention*. Lexington Books, Lexington, Massachusetts.
- Ward, Alex E. and William Brooks (1991) "Environmental Design at Work" in *Architecture and Security* March.
- Warren, Rochelle and Donald Warren (1977) *The Neighborhood Organizer's Handbook* University of Notre Dame Press, Notre Dame, Indiana.
- Wilson, James. (1986) "Planning Safer Communities" in *Plan Canada*.
- Wilton, Suzanne. (1995) "Crime Fears Slide in City" in *Calgary Sun*.
- Wismer, David, D. Christensen and J. Zebarth (1992) *Crime Prevention Through Environmental Design Considerations in Calgary Transit Facilities Preliminary Report*. Calgary Transit, Calgary Alberta.
- The Women's Action Centre Against Violence. (1995) *Safety Audit Tools and Housing: The State of the Art, and Implications for CMHC*. Prepared for Canadian Mortgage and Housing Cooperation.
- Zurowski, Monica and Gordon Jaremko. (1996) "Winning the Crime Battle is a Community Effort" in *The Calgary Herald*. May 24. Calgary, Alberta.

Videos

The Safeside: A Community Safety Audit Video. (1996) Produced by the Action Committee Against Violence and The Calgary Police Service. Calgary, Alberta

Safer for Women, Safer for Everyone. A Video About Safety on Campus. Produced by METRAC. directed by Gerry Rogers. Toronto, Ontario.

Documentary about Canyon Lake: A Gated Community aired December 6, 1995 on *The National*.

Personal Contacts

Barry Davidson. The Canadian Crime Prevention Centre. Conversation November 5, 1995. Calgary, Alberta.

Colleen Miller. Wildwood Community Association. Conversation January 22, 1996. Calgary, Alberta.

Kathy Haberjanic. Millrise Community Association. Conversation January 23, 1996. Calgary, Alberta.
