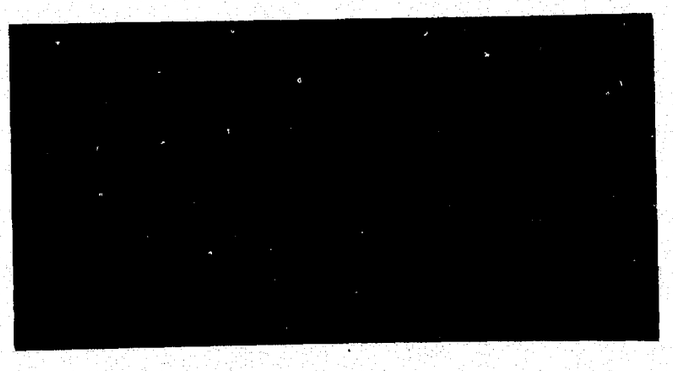
GOVERNOR'S COMMISSION
ON CRIME PREVENTION
AND CONTROL

EDEN PRAIRIE

The Prioritized Premise Survey Program

AN EVALUATION REPORT



EDEN PRAIRIE (MN).

The Prioritized Premise Survey Program

An Evaluation

prepared by the

Evaluation Unit

Governor's Commission on Crime Prevention and Control

State of Minnesota

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SECTION 1: INTRODUCTION

Eden Prairie, a growing community located in the southwest corner of Hennepin County, was incorporated as a city on January 1, 1963. The Eden Prairie population grew to 6,800 within one decade, at which time the Public Safety Department was established. The 1975 population approximated 10,000, and this rapid growth is expected to continue. Metropolitan Council projections forecast 19,000 residents in 1978 and nearly 50,000 by the end of this century.

Since its inception, the Public Safety Department has had a firm commitment to crime prevention as a police function. One of the Department's goals is to prevent Eden Prairie from developing the major crime problems that have plagued neighboring suburbs as they have grown. In order to achieve this goal and to help create strong community support which is vital to the crime prevention approach, the Department immediately created a formal Crime Prevention Unit.

The Premise Survey

Among the Unit's many crime prevention activities is the "premise survey" program. A premise survey is a police officer's inspection of a home or business to determine its security deficiencies and to make recommendations for their correction. Many departments offer some kind of premise survey program, and all such programs are fundamentally similar. The officers' recommendations include locks, alarms, lighting and other security steps that, if taken, are likely to make the buildings less desirable and less penetrable as targets for burglary. In most cases the inspecting officer gives the occupant a handwritten list of recommendations; it is up to the individual occupants to make the actual

changes.

Eden Prairie's premise survey program is different from most others in that the recommendations are "prioritized"; that is, they are listed in the order of a burglar's most likely point of entry into that particular structure. The number and order of the priorities differ from structure to structure because of differences in the premises' existing security, architecture, and surrounding landscape.

The finished Eden Prairie premise survey list of recommendations is thorough, yet concise. The lists are sent to the occupants after being typed at the Public Safety Department. Occupants are encouraged to make security changes in the order of priority, at a pace of at least one change per month. The Department feels that neatly prepared, prioritized survey lists are the best way of motivating people to make changes, which will help to deter burglary and keep the crime statistics at their relatively low level.[1]

In Eden Prairie, the premise survey also is viewed as a valuable public relations tool. Surveys are conducted by crime prevention and community service officers who are not bound by the traditional duty of responding to calls. They therefore are free to make extensive and extended visits to homes and businesses, spending as much time as is necessary to advise people about home and business security. From January, 1973, through December, 1975, the Department conducted premise surveys on 210 residential targets in the community. Since the prioritized format took effect in January, 1974, 160 residences have been surveyed, for a monthly average of 6.7.[2] The Department estimates the cost for an hour-long survey to be approximately $20.00 including wages, mileage, and clerical assistance.[3] The total premise survey expenditure through 1975, therefore, was roughly $4,200.00.

The Department has received many letters of appreciation for the premise survey service. However, there is little documentation of the residents' actual compliance with the officers' recommendations. As a result of the Department's desire to determine compliance and to improve its crime prevention program, an evaluation of the premise survey program was conceived.

Methodology

In the fall of 1975, the Department of Public Safety developed a follow-up questionnaire with the assistance of the Governor's Commission on Crime Prevention and Control. Questionnaires were delivered to 102 recipients of prioritized premise surveys. The questionnaires were hand delivered, anonymous, and accompanied by stamped, self-addressed, return envelopes; 50 (49.0%) were returned for analysis.

The questionnaire consisted of three major sections (see Appendix A). The first section, which gathered information on the respondents' actual compliance with the premise survey recommendations, was adjustable to accommodate each

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[1]The 1973 burglary rate in Eden Prairie was 706 per 100,000 people (based on its Department incidence figure and a Metropolitan Council population estimate of 7,501); by 1975, the rate had risen 28.9% to 910.5 per 100,000 (Minnesota Bureau of Criminal Apprehension [BCA] figure).

[2]A survey to measure the reorientation of Minnesota law enforcement agencies toward crime prevention as encouraged by the Minnesota Crime Watch statewide crime prevention program was conducted by the Governor's Commission on Crime Prevention and Control's Evaluation Unit in the fall of 1975. Data gathered from this survey showed an average of 13.1 premise surveys per agency per month among member agencies interviewed.

[3]A Golden Valley Report of one year earlier calculated a $4.20 cost per survey.

respondent's exact number of recommendations. The second section attempted to determine the respondents' opinions about certain aspects of the premise survey program. The questionnaire ended with inquiries concerning Operation Identification enrollment and burglary. It was hoped that this information would be useful in comparison with the premise survey data.

Qualifications on Interpretation

There are certain characteristics of the Eden Prairie community that demand attention before the results of this evaluation are interpreted. In general, Eden Prairie is somewhat unique, as highlighted by selected characteristics relevant to premise surveys. As mentioned, the burglary problem is relatively low. The 1975 burglary rate (standardized per 100,000 people) in Eden Prairie was 910.5; in Minneapolis it was 2455.0, and in the rest of Hennepin County (minus Eden Prairie and Minneapolis) it was 1116.5.[4] The rates suggest that caution be used in comparing the Eden Prairie results to Minneapolis because of the apparent drastic differences in their crime environments. Similar caution should be used in comparing the Eden Prairie results to the rest of Hennepin County. Although the burglary rate differences are not as great, the Eden Prairie rate is lower. It is possible that people who live in an atmosphere of less crime may have attitudes different from those of people living in higher crime areas. These attitudes, in turn, may result in different behavior patterns in regard to premise survey compliance.

The difference in burglary rate is not the only distinctive feature of Eden Prairie. Another variable is density. Eden Prairie's population density of 216 people per square mile is extremely low when compared with Minneapolis and the rest of Hennepin County (see TABLE 1.1). Residents in the more sparsely populated areas of Eden Prairie may show higher compliance than those in other areas because the security of having neighbors nearby is lessened.

[4]Burglary rates taken from the Minnesota Bureau of Criminal Apprehension (BCA) Uniform Crime Report (UCR) data.

TABLE 1.1

COMPARATIVE CHARACTERISTICS OF EDEN PRAIRIE, MINNEAPOLIS, AND HENNEPIN COUNTY[a]

	EDEN PRAIRIE	MINNEAPOLIS	HENNEPIN COUNTY[a]
DENSITY[b] (residents per square mile)	216.6	11,079.9	1,087.4
AVERAGE MARKET VALUE of owner-occupied housing	$31,168[c]	$19,632[c]	$27,532[e]
AVERAGE FAMILY INCOME	$17,000[d]	$11,127[c]	$15,395[e]

[a]The Hennepin County data excludes statistics for Minneapolis and Eden Prairie.

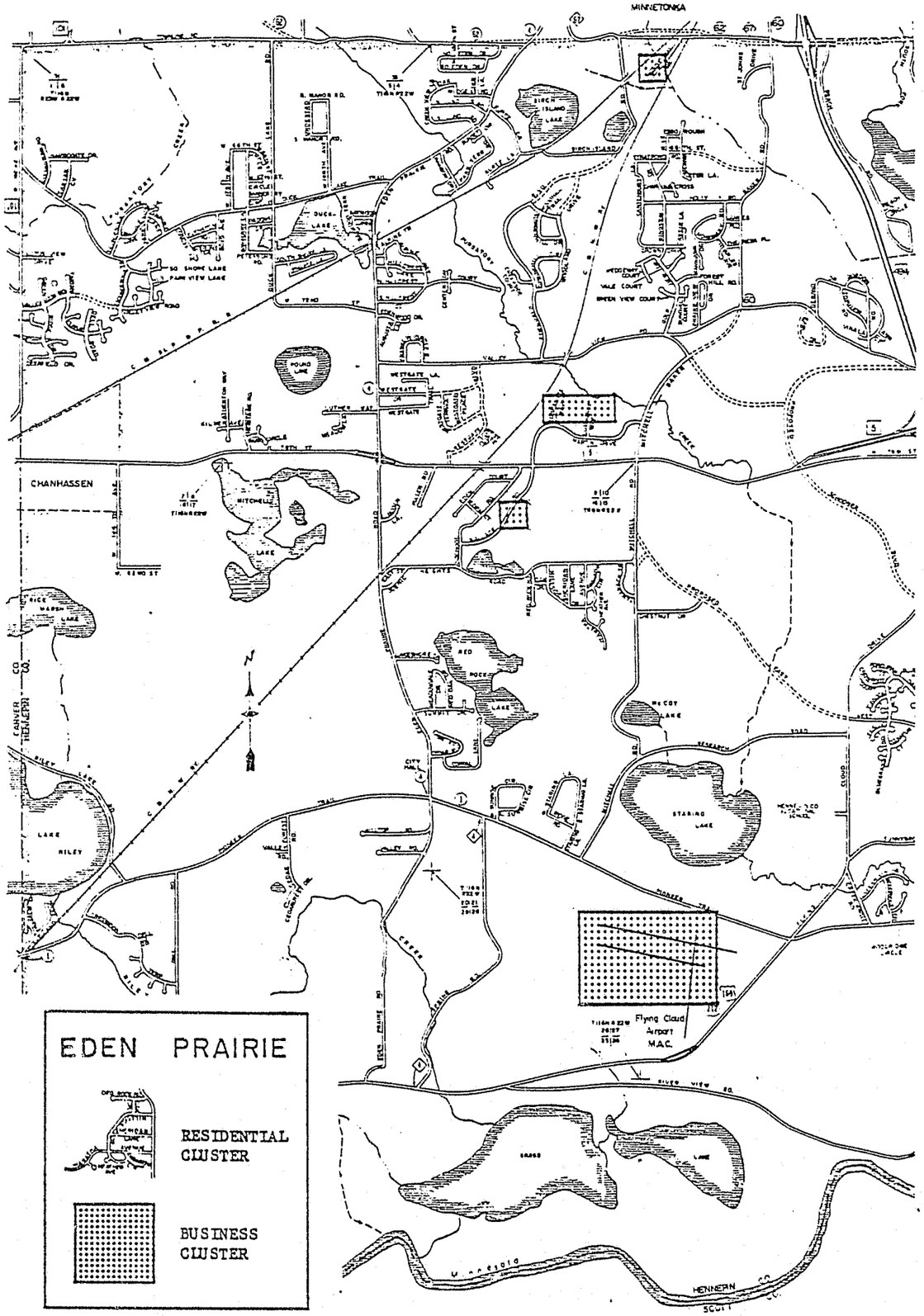
[b]Computed using 1975 population estimates from the Bureau of Criminal Apprehension.

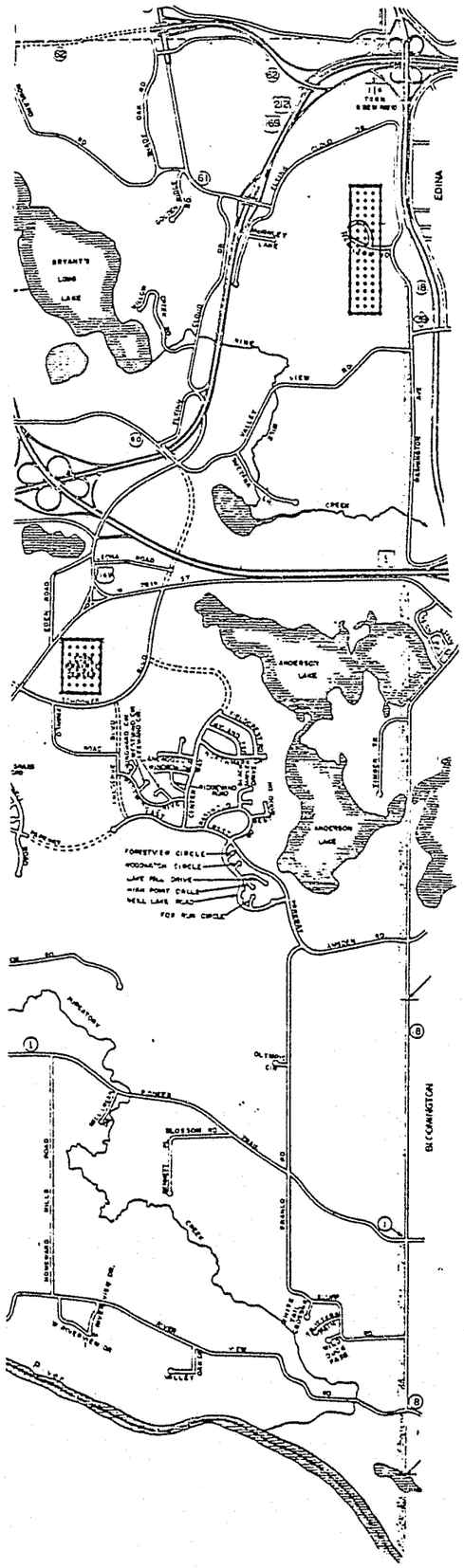
[c]From the Metropolitan Council's Municipal Housing Profile (June, 1974), which used 1970 U.S. Census Bureau data.

[d]Eden Prairie Public Safety Department estimate.

[e]Computed from 1970 U.S. Census Bureau data.

Two final statistics in TABLE 1.1 show other premise survey compliance-related differences. The average home value and the average family income are higher in Eden Prairie than in Minneapolis or the rest of Hennepin County. Higher market values and income levels may affect the use of security measures because of the increased potential loss from such households.





Another potential influence on premise survey compliance is the city layout. Eden Prairie is a fast growing area. Its present total of 10,000 residents live in an area of 36 square miles. As the accompanying map shows, most of the commercial and residential development is found in the northern half of the city. Eden Prairie's 255 businesses are clustered in five major areas. Most of the approximately 3,500 residential units also are located in fairly distinct groups, as indicated by the concentrations of streets on the map. The residential areas are characterized by their scarcity of through streets, which, in theory, raises the neighborhoods' cohesion and lowers their accessibility to outsiders.

The clustering of both the residential and business areas is quite different from the more established cities in Hennepin County, and it could be that this layout leads to different crime patterns and different community coherence, which, in turn, may result in different levels of compliance.

At the present time, Eden Prairie appears to be rather uncharacteristic of the typical Hennepin County suburb. Undoubtedly, as time passes, the city will see more burglary, higher density, a more traditional layout, and income levels closer to the county average. For now, however, it would be misleading to apply the Eden Prairie premise survey results to any other communities unless the communities were carefully matched.

One characteristic with a potentially longer-lasting influence on premise survey compliance is the complexion of the Eden Prairie Public Safety Department itself. Because the Department was formed at a time when crime prevention was starting to gain strength in Minnesota, the Department was able to incorporate this philosophy right from the start. As a result, the Department has had a great advantage over more-established departments in structuring its agency and hiring its personnel. By incorporating crime prevention from the outset, Eden Prairie has been able to hire officers receptive to the crime prevention perspective, rather than having been forced to attempt to convert the attitudes of officers seasoned (and often stubborn) in the more traditional law enforcement atmosphere of apprehension, not prevention. It is likely that this departmental complexion has created stronger commitments to crime prevention than are found in other police departments. In turn, greater departmental enthusiasm may result in a louder and longer-lasting response from the community, perhaps in the form of increased premise survey compliance.

A final qualification deserves mention. The vast majority of the premise survey recipients in Eden Prairie were first members of Operation Identification, Minnesota Crime Watch's property-marking program. This is not necessarily the case in most other communities. The Eden Prairie residents who request premise

surveys may be above-average in "security consciousness," that is, they may be more willing to take precautionary measures than most people. In sum, one should be careful in using the Eden Prairie findings as standards. The comparative value of the results lies in the apprehension that if the above-average income and security-conscious residents of Eden Prairie do not comply with premise survey recommendations, it is questionable that others will.

Selected Data on the Respondents

The respondents to the questionnaire had been members of Operation Identification for as many as 46 months prior to the follow-up. The average membership was 15.7 months. They had received premise surveys from 1 to 18 months before the questionnaire, with an average of 12.1 months. All but one of the responses came from residents of single family dwellings, and the average respondent received 5.1 recommendations during the premise survey.

Responses to a few of the questions provide a general feeling of the people's acceptance of the premise survey program. Of all the respondents, 93.5% indicated that they felt the survey was informative. Of those who made at least one change, 91.7% said that they felt more secure after making the changes. Only 4.3% responded that the recommendations were too expensive. Finally, when asked if they made their changes out of "personal" concerns or "property" concerns, 58.3% indicated personal reasons and 8.3% gave property reasons. One-third placed equal emphasis on both.

SECTION 2: PREMISE SURVEY COMPLIANCE

Overall Compliance

Premise survey compliance, which is the major concern of this report, is viewed from several perspectives in Section 2. Overall compliance and overall non-compliance, the topics of the first two sections, each are examined using two different data bases. The first analysis is based on the questionnaire's total number of respondents (N = 50), showing how many respondents made changes, what types of changes they made, and their reason for non-compliance. The second data base is larger (N = 255) due to the fact that it uses the total number of recommendations made to the 50 respondents. This analysis also examines the percentage of compliance, the types of changes, and the non-compliance reasons.

The last part of Section 2 deals with two specialized perspectives of compliance. The first is an analysis of the individual, prioritized recommendations to determine the effects of the priority system on compliance. The second analysis introduces compliance levels for the respondents and compares compliance activity among compliance levels (non-compliance, low, medium, and high compliance).

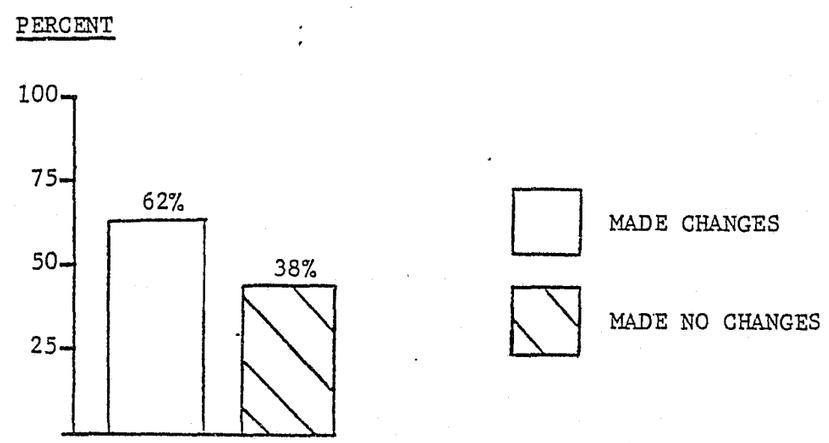
Overall Compliance

The 50 Respondents

The compliance analysis section begins with a review of the activity of those who responded to the questionnaire. Of the 50 people who replied, 31 (62.0%) made some kind of security change based on the premise survey recommendations (see Figure 2.1).

Figure 2.1

COMPLIANCE OF THE 50 RESPONDENTS



Most of the people who acted upon the recommendations were able to make more than one change. A total of 41.9% made two changes and another 29.0% made three or more (see TABLE 2.1). Perhaps a better indication of compliance is the percentage of people who made their changes in full accordance with the officers recommendations.[5] TABLE 2.1 shows that all 31 respondents who made changes were able to make some change in full. The majority (58.1%) made two or more changes in full compliance. Moreover, other data show that if a person made a change, he most likely made it in full compliance; 26 (83.9%) of the 31 people who made changes made all their changes in full.

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[5]It is possible for a premise survey recipient to have partial compliance. For example, a person might decide to install a device other than the one recommended by the inspecting officers. A change other than the recommended change may appear to provide sufficient security at a lower cost or installation effort, and it does deserve credit as compliance. However, the compliance of a recipient who makes his changes exactly as recommended is considered more noteworthy.

TABLE 2.1

EXTENT OF COMPLIANCE FOR THOSE WHO MADE SOME CHANGES

	OVERALL COMPLIANCE[a] N = 31	FULL COMPLIANCE[b] N = 31
One Change	29.0%	41.9%
Two Changes	41.9	32.3
Three or More Changes	29.0	25.8
TOTAL	99.9%	100.0%

[a]Includes any change made at the recommended locations.

[b]Includes only those changes made in full; i.e., recommended device installed.

In addition to making most of their security improvements in full, most of the respondents were able to make some changes without professional assistance. TABLE 2.2 shows that 83.9% of those who made changes made at least one change by themselves. Nearly half (45.2%) of the respondents made two or more changes by themselves. Only 16.2% paid to have changes made.

TABLE 2.2

HOW CHANGES WERE ACCOMPLISHED

	Made by Respondents Themselves	Made with Professional Assistance
One Change	38.7%	6.5%
Two Changes	35.5	6.5
Three or More	9.7	3.2
TOTAL N = 31	83.9%	16.2%

A review of the amount of money spent by those who made changes shows that 87.2% managed to make a change for less than $10.00 (see TABLE 2.3). Less than half (42.0%) of those who made changes spent from $10.00 - $25.00; 6.4% spent from $25.01 - $50.00; and 16.2% spent more than $50.00 in complying with a premise survey recommendation. (The number of people making changes totals more than 100.0% because a respondent may have made changes in more than one price category.)

TABLE 2.3

DOLLAR AMOUNT EXPENDED BY RESPONDENTS FOR SECURITY CHANGES[a]

	Less Than $10.00	$10.00 to $25.00	$25.01 to $50.00	More Than $50.00
One Change	58.1%	25.8%	3.2%	9.7%
Two Changes	19.4	6.5	3.2	6.5
Three or More	9.7	9.7	---	---
TOTAL N = 31	87.2%	42.0%	6.4%	16.2%

[a]Multiple responses possible.

TABLE 2.4 shows that most (77.4%) of the people who complied made a change within one month of their premise survey. Although the Eden Prairie police officers have suggested that people try to make one change per month, 29.0% of those complying acted upon two or more changes within the first month. (Again, 100.0% is surpassed because of multiple responses.) Less than one-fourth (22.6%) of the people made changes within 1 - 3 months after their surveys, but activity continued through the 4 - 12 month period. Responses of more than one year, however, are negligible. Apparently if people are going to make changes, they will do so within a year of the premise survey.

TABLE 2.4

TIME INTERVAL BEFORE RESPONDENTS MADE CHANGES[a]
(by months after Premise Survey)

	Less Than 1 Month	1 to 3 Months	4 to 12 Months	More Than 12 Months
One Change	48.4%	19.4%	29.0%	3.2%
Two Changes	16.1	3.2	6.5	---
Three or More	12.9	---	---	---
TOTAL N = 31	77.4%	22.6%	35.5%	3.2%

[a]Multiple responses possible.

The 255 Recommendations

The preceding tables used the 50 respondents to the questionnaire as the base for analysis. Another perspective on compliance comes from analysis of the total number of security recommendations made to these respondents during their premise surveys. The inspecting officers made 255 recommendations, an average of 5.1 per residence. TABLE 2.5 shows that 74 changes were made, for a 29.0% compliance figure. For the 31 respondents who made some or all of the recommended security changes, the compliance figure increases to 47.7%.

TABLE 2.5

OVERALL COMPLIANCE WITH RECOMMENDATIONS

	FREQUENCY	PERCENT
Recommendations Made to All Respondents N = 255	74	29.0%
Recommendations Made to Respondents Who Made Changes N = 156	74	47.7%

The following four tables present the results of questions asked to gather data on specific characteristics of the 74 changes. Unfortunately not all of the respondents who indicated that they made changes answered the additional questions. As a result, base numbers and percentages vary from column to column. For example, although 74 changes were made, there were only 67 responses to the question, "What change was made [full or partial]?" Of these 67, 64 (95.5%) indicated full compliance (see TABLE 2.6). The 61 responses to the question "Who made the change?" indicate that 73.8% of the changes were made by the respondents themselves. Slightly more than one-fourth were done with professional assistance.

TABLE 2.6

CHARACTERISTICS OF CHANGES MADE

	FREQUENCY	PERCENT
Full Compliance N = 67	64	95.5%
Changes Made by Respondents Themselves N = 61	45	73.8%
Changes Made with Professional Assistance N = 61	16	26.2%

The costs of making these changes are shown in TABLE 2.7. More than half (54.2%) of the total changes and three-fourths of the changes made by the respondents themselves cost less than $10.00. Of the total changes, 86.1% were made for less than $25.00. The data also show that no respondent paid more than $25.00 for a change unless it was done with professional assistance. It might have been expected that the costs for these professional changes would be substantially higher than the costs for the do-it-yourselfer. Indeed, the

professional costs are higher, but it may be surprising to note that 37.5% of the changes made by professionals cost less than $25.00.

TABLE 2.7

COSTS OF CHANGES MADE

	Total Changes (Percent)	Made by Respondents Themselves	Made with Professional Assistance
Less Than $10	54.2%	75.0%	---
$10 to $25	31.9	25.0	37.5%
$25.01 to $50	4.2	---	18.8
More Than $50	9.7	---	43.8
Total NUMBER of Changes	N = 72	N = 44	N = 16
Missing[a]	2	1	--

[a]"Missing" figures reflect the answers of respondents who chose not to answer questions that asked for additional information on the changes made.

A review of TABLE 2.8 shows that of the changes made, 67.9% were made within one month of the premise survey. The percentage was even higher for changes made by professionals, indicating that the need to seek outside help did not cause the respondents to delay in making changes. The second highest percentages in all columns are the changes made in 4 - 12 months, with 19.6% of the changes made during this time. Only one change was made more than one year after the premise survey, however.

TABLE 2.8

TIME INTERVAL BEFORE CHANGES WERE MADE
(months after Premise Survey)

	Total Changes (Percent)	Made by Respondents Themselves	Made with Professional Assistance
Less Than 1 Month	67.9%	62.5%	81.3%
1 to 3 Months	10.7	15.0	---
4 to 12 Months	19.6	20.0	18.8
More Than 12 Months	1.8	2.5	---
Total NUMBER of Changes	N = 56	N = 40	N = 16
Missing[a]	18	5	--

[a]"Missing" figures reflect the answers of respondents who chose not to answer questions that asked for additional information on the changes made.

Just as employing an outside source did not seem to cause delay in making changes, it appears that high costs in general did not inhibit the respondents' immediate attention to their security deficiencies (see TABLE 2.9). In each cost category, the majority of changes were made within one month of the premise survey. In fact, the percentage of changes made within a month is as high for changes that cost more than $25.00 (70.0%) as for those that cost less than $10.00 (70.6%).

TABLE 2.9

TIME INTERVAL FOR CHANGES OF VARYING COST
(months after Premise Survey)

	Less Than $10	$10 - $25	More Than $25
Less Than 1 Month	70.6%	52.9%	70.0%
More Than 1 Month	29.4	47.1	30.0
Total NUMBER of Changes	N = 34	N = 17	N = 10
Missing[a]	5	6	--

[a]"Missing" figures reflect the answers of respondents who chose not to answer questions that asked for additional information on the changes made.

Compliance by Location and Device

Previous analysis has indicated that 62.0% of the respondents made security changes based upon their premise survey recommendations and that these people made changes for 47.7% of their recommendations. When based on the 255 recommendations made to all 50 respondents, the compliance is 29.0%. There are patterns in the data which show that most of the changes were made in full compliance with the officers' recommendations, were made by the respondents themselves, cost less than $10.00, and were completed within one month of the premise survey. The following section examines specific points of entry into residences and the accompanying recommended security devices to determine the consistency of these patterns.

The locations most often cited for a security deficiency were front doors and patio-sliding glass doors, with each receiving 16.6% of the total recommendations (see TABLE 2.10). Garage door locations were next most

frequent, followed by other house doors, and windows.

TABLE 2.10

LOCATIONS OF RECOMMENDATIONS AND
THE COMPLIANCE RATING AT EACH LOCATION

	TOTAL RECOMMENDATIONS		COMPLIANCE AT EACH LOCATION	
	Frequency	Percent	Frequency	Percent
Front Doors	34	16.6%	9	26.5%
Patio-Sliding Glass Doors	34	16.6	14	41.2
Garage Overhead Doors	31	15.1	12	38.7
House to Garage Doors	22	10.7	7	31.8
Garage Service Doors	22	10.7	8	36.4
Other Doors	17	8.3	7	41.2
Lower Windows	21	10.2	6	28.6
Garage Windows	12	5.9	3	12.0
Other	12	5.8	7	58.3
TOTAL	205	99.9%	73	
Percent of TOTAL Recommendations				35.6%
Missing[a]	50		1	

[a]"Missing" figures reflect the answers of respondents who chose not to answer questions that asked for additional information on the changes made. In this instance it should be noted that most of those who did not answer were those who made no changes.

TABLE 2.10 also shows the compliance at each of these locations. Compliance ranges from 12.0% for garage windows to 41.2% for patio-sliding glass doors and other doors. These individual location figures should be compared with the table total of 35.6% compliance for all locations, not to the 29.0% compliance figure presented in TABLE 2.5.[6] These compliance figures may reflect how important the respondents consider the specific locations to be in the prevention of a burglary. The 26.5% compliance at the front doors (the second lowest of any location) is somewhat surprising in light of the frequency of

[6]As noted previously, the failure of respondents to answer all questions resulted in variations from table to table.

front door entry in residential burglary,[7] and suggests a need for more education of the public in regard to burglars' points of entry.

Data on specific devices is presented in a similar fashion in TABLE 2.11. The device most often recommended was the double-cylinder deadbolt lock, which was the suggested remedy for 31.3% of the security deficiencies.

TABLE 2.11

DEVICES RECOMMENDED AND THE COMPLIANCE RATINGS FOR EACH DEVICE

	TOTAL RECOMMENDATIONS		COMPLIANCE FOR EACH DEVICE	
	Frequency	Percent	Frequency	Percent
Double-Cylinder Deadbolt Locks	63	31.3%	25	39.7%
Channel Locks	28	13.9	12	42.9
Deadbolts[a]	25	12.4	4	16.0
Wire Mesh	20	10.0	3	15.0
Key-Operated Locks	20	10.0	4	20.0
Charlie Bars	9	4.5	7	77.8
Other[b]	36	17.9	14	38.9
TOTAL	201	100.0%	69	
Percent of TOTAL Recommendations				34.3%
Missing[c]	54		5	

[a]Either single- or double-cylinder deadbolt locks; officers did not specify.

[b]Other recommendations include the use of nails, screws, pins, track locks and other less-sophisticated locking devices, the removal of cranks from windows, or replacement of unsatisfactory doors. Eden Prairie inspecting officers recommended these "devices" so infrequently that they are individually insignificant for analysis.

[c]"Missing" figures reflect the answers of respondents who chose not to answer questions that asked for additional information on the changes made.

[7]Thomas A. Reppetto's Residential Crime, (Ballinger Publishing Co., 1974), analyzed Boston Police Department records on residential burglary. His data show that burglars gained entrance (through either doors or windows) from the front of the house 61.1% of the time.

Devices recommended less often range from "charlie bars" (4.5%)[8] to channel locks (13.9%). The compliance for the individual devices has a wider range -- from 15.0% for wire mesh changes to 77.8% for installation of charlie bars. The discrepancy between these two devices is somewhat surprising in that they both call for fairly simple corrective action at little expense,[9] Other than charlie bars, the devices of highest compliance are channel locks (42.9%) and double-cylinder deadbolt locks (39.7%), both of which are more expensive devices.

TABLE 2.12 shows, however, that double-cylinder locks are much more expensive to change than are channel locks. Of the channel lock changes, 90.9% cost less than $10.00, but only 16.0% of the double-cylinder locks were installed for that amount. The high compliance figures for charlie bars and channel locks may be greatly influenced by their less expensive natures, but the above-average compliance of double-cylinder deadlocks suggests that expense may not be the primary consideration for making security improvements. These figures show the respondents' acceptance of the double-cylinder deadbolt lock as a desirable burglary prevention device despite its high cost.[10]

[8]A "charlie bar" is a rigid pole-like device, which, when placed in the track of a sliding door or window, prevents entry. Cut-off broomhandles make excellent charlie bars.

[9]The reluctance of people to use wire mesh may be due to a fear of making the residence's exterior less attractive.

[10]TABLE 2.7 showed that the only changes that cost more than $25.00 were those done by professionals. TABLE 2.12 shows that 20.0% of those who installed double-cylinder deadbolts felt this additional expense was justified.

TABLE 2.12

COSTS OF CHANGES USING SPECIFIC DEVICES[a]

	Double-Cylinder Locks	Channel Locks	Charlie Bars
Less Than $10	16.0%	90.9%	83.3%
$10 to $25	64.0	9.1	16.7
$25.01 to $50	4.0	---	---
More Than $50	16.0	---	---
Total NUMBER of Changes	N = 25	N = 11	N = 6
Missing[b]	--	1	1

[a]Although 17 individual devices were recommended by the officers, only these three had sufficient compliance for further analysis.

[b]"Missing" figures reflect the answers of respondents who chose not to answer questions that asked for additional information on the changes made.

One undesirable result of the expense of the recommended devices may be a delay in the actual installation of a device (see TABLE 2.13).

TABLE 2.13

MONTHS AFTER PREMISE SURVEY THAT SPECIFIC DEVICES WERE INSTALLED

	Double-Cylinder Locks	Channel Locks	Charlie Bars
Less Than 1 Month	50.0%	80.0%	85.7%
1 to 3 Months	15.0	---	---
4 to 12 Months	35.0	20.0	14.3
Total NUMBER of Changes	N = 20	N = 10	N = 7
Missing[a]	5	2	--

[a]"Missing" figures reflect the answers of respondents who chose not to answer questions that asked for additional information on the changes made.

As seen in TABLE 2.13, only half of the expensive double-cylinder deadbolt changes were made within one month of the premise survey, whereas 80.0% of the channel locks and 85.7% of the charlie bars received immediate attention. Although 35.0% of the double-cylinder deadbolt lock changes were delayed to 4 - 12 months past the survey, the fact remains that they were changed, despite their cost.

The analyses of location and device point to several suggestions for future premise survey recommendations. As mentioned, the public is perhaps in need of more education on the most common locations of entry. Front doors showed a lower than average compliance, yet that location is considered to be a primary point of entry in residential burglary. The Eden Prairie officers' concern over the front door is reflected by the fact that this location is one of the two locations most frequently addressed during the premise surveys. This holds true for both the overall recommendations and for the first-priority (most important) recommendations. Perhaps this concern about the front door should be even more stressed to the public.

The patio-sliding glass door is the other most frequently cited location, and the devices most often recommended to secure these doors are key-operated locks and charlie bars (see TABLE 2.14). Considering that charlie bars have a compliance figure nearly four times higher than that of key-operated locks, it seems logical that charlie bars be recommended whenever possible. If charlie bars are adaptable to all patio-sliding glass doors and are considered as effective as key-operated locks, perhaps compliance would be highest if the inspecting officers recommended only the charlie bar.

TABLE 2.14

DEVICES RECOMMENDED FOR SPECIFIC LOCATIONS

	Double-Cylinder Deadbolt Locks	Unspecified Deadbolts[a]	Key-Operated Locks	Charlie Bars	Channel Locks	Wire Mesh	Pinning
Front Doors	70.6%	20.6%	---	---	---	---	---
Patio-Sliding Doors	---	---	38.2%	26.5%	---	---	---
Garage Overhead Doors	---	---	---	---	90.3%	---	---
House to Garage Doors	59.1%	36.4%	---	---	---	---	---
Garage Service Doors	77.3%	13.6%	---	---	---	---	---
Other Doors	51.9%	37.5%	---	---	---	---	---
Lower Windows	---	---	23.8%	---	---	28.6%	19.0%
Garage Windows	---	---	---	---	---	66.7%	---

[a]The inspecting officer did not specify single- or double-cylinder deadbolt locks.

TABLE 2.14 also shows that double-cylinder deadbolt locks are the most common recommendation for all doors except patio-sliding glass and garage overhead doors. Second in frequency on these doors is the recommendation of an unspecified deadbolt lock. TABLE 2.11 showed that when a double-cylinder deadbolt lock was specified, compliance was 39.7%. When the deadbolt lock was unspecified, however, compliance dropped to 16.0%. Perhaps the unspecified recommendation caused enough confusion to keep the compliance low, or perhaps the specific recommendation of a double-cylinder deadbolt lock made the change seem more important; whatever the reason, it seems that compliance would be increased at most house and garage doors by specifying double-cylinder deadbolt locks in all appropriate cases.[11]

Finally, TABLE 2.14 shows that for lower windows and, more noticeably for garage windows, wire mesh is the most common device recommended. The compliance figure for wire mesh is the lowest of all those examined; perhaps alternatives to wire mesh recommendations should be given more consideration.

[11]Although the double-cylinder deadbolt lock is often said to offer the most security of any lock, it does have its disadvantages. For example, its unique feature, that of preventing entry from either side of the door without the use of a key, keeps intruders out, but it also impedes an occupant making an emergency exit from the house.

Summary

Of the 50 respondents, 62.0% made some kind of security change based on the premise survey recommendations. A total of 41.9% made two changes and 29.0% made three or more changes. In addition, 83.9% of those who made changes made all their changes in full, and the same percentage made at least one change by themselves.

The majority of the respondents (87.2%) managed to make at least one change for less than $10.00, and nearly as many (77.4%) made a change within one month of the survey.

Additional data showed that the 50 respondents received a total of 255 recommendations, of which 74 (29.0%) were changed. When asked for more detailed information on these changes, respondents indicated the following: 95.5% were full compliance; 73.8% were made by the respondents themselves; 54.2% cost less than $10.00 (86.1% cost less than $25.00); and 67.9% were made within one month of the premise survey. It also was noted that no "do-it-yourself" change cost more than $25.00, and that 37.5% of the professional changes cost less than $25.00.

Compliance percentages vary considerably among specific points of entry and specific security devices. A review of the costs of the individual devices showed that high cost did not necessarily lead to non-compliance, but indications are that higher cost causes some delay in making changes. Perhaps the most alarming finding of the analysis of specific locations and devices is that compliance with front-door recommendations is second lowest of any location, despite the front door's popularity as a point of entry for burglars.

Overall Non-Compliance

Discussion of general compliance data is incomplete without analysis of the respondents' reasons for not making changes. The format for this analysis of non-compliance is similar to that of the compliance section; the first two tables present data on the entire group of fifty respondents and the remaining tables are based on the total number of recommendations not complied with.

The 50 Respondents

Of the 50 respondents, 38.0% made no changes whatsoever. Another 60.0% made some changes, but they did not comply with everything. Only one person made all the changes recommended for his residence.

The respondents gave various reasons for their non-compliance. The reason cited by most respondents was "no time to make change," which was mentioned at least once by 71.4% of the respondents. Nearly half (44.9%) mentioned this reason more than once (see TABLE 2.15). The second most common reason was "didn't agree with recommendation," cited at least once by 32.7%. Only 10.2% disagreed with more than one recommendation. The reason mentioned by the fewest respondents was "too expensive" to make the change, with just 14.3% of the respondents feeling that any of their recommendations would be too expensive to change. As was the case for "didn't agree," 10.2% gave this reason for more than one recommendation. It is encouraging to note that 24.5% of the respondents had had an estimate made for at least one proposed change, and that 71.4% plan to make at least one change. Of these respondents, 46.9% plan to make two or more changes.

TABLE 2.15

REASONS FOR NON-COMPLIANCE AND PLANS FOR CHANGE
(based on the 49 respondents who had less than total compliance)[a]

	Mentioned At Least Once N = 49	Mentioned More Than Once N = 49
Didn't Agree with Recommendation	32.7%	10.2%
Too Expensive	14.3	10.2
No Time to Make Change	71.4	44.9
Plan to Make Change	71.4	46.9
Had an Estimate	24.5	10.2

[a]Multiple responses possible.

The 255 Recommendations

Data based on the total number of recommendations are shown in TABLES 2.16 and 2.17. Of the 255 recommendations the respondents received, 181 (70.1%) were not changed at all. The most common reason for not making a change was "had no time" to make the change, which was indicated for 46.4% of the recommendations not complied with (see TABLE 2.16).

Next most popular were "didn't agree with the recommendation," suggested 13.3% of the time, and "too expensive," 8.3%. Six less frequent reasons were mentioned a total of 14.3% of the time. Encouragingly, 49.7% of the unchanged recommendations fell into the "plan to change" category, and 10.5% had received a cost estimate.

TABLE 2.16

REASONS FOR NON-COMPLIANCE AND PLANS FOR CHANGE
(based on the total number of unchanged recommendations)[a]

	N = 181
Didn't Agree with Recommendation	13.3%
Too Expensive	8.3
No Time to Make Change	46.4
Other[b]	14.3
Plan to Make Change	49.7
Had an Estimate	10.5

[a]Multiple responses possible.

[b]Includes "already feel secure," "not sure what to do," "remodeling," "inconvenient," "not away from home," and "no good reason."

Non-Compliance by Location and Device

The percentages of non-compliance for each specific location and device can be determined by taking the converse of their compliance scores, which were shown in TABLES 2.10 and 2.11. The two highest non-compliance scores for specific locations were found for garage windows (88.0%) and for front doors (73.5%). Among the devices, the three highest non-compliance scores were for wire mesh (85.0%), unspecified deadbolts (84.0%), and key-operated locks (80.0%). The major reasons for not making changes on the devices of highest non-compliance are that the respondents had no time to make a change, and that they did not agree with the recommendation. Wire mesh recommendations generated a 29.4% response for "had no time" and 17.6% for "didn't agree" (see TABLE 2.17). Recommendations for key-operated locks

received an 18.8% response for the two reasons.

TABLE 2.17

REASONS FOR NON-COMPLIANCE AND PLANS FOR CHANGE
by SPECIFIC DEVICES[a]

	Wire Mesh N = 17	Key-Operated Locks N = 16	Un-specified Deadbolt Locks N = 16	Double-Cylinder Deadbolt Locks N = 38	Other[b] N = 45
Didn't Agree with Recommendation	17.6%	18.8%	37.5%	7.9%	17.8%
Too Expensive	11.8	6.3	12.5	13.2	6.7
No Time to Make Change	29.4	18.8	18.8	57.9	55.6
Plan to Make Change	47.1	31.3	56.3	71.1	51.5
Had an Estimate	5.9	18.8	18.8	15.8	8.9

[a]Multiple responses possible.

[b]Includes channel locks, track locks, charlie bars, pinning, nails, screws, and other barriers used to secure locations.

Double-cylinder deadbolt locks have the highest percentage of "had no time" (57.9%) and "plan to change" (71.1%) responses. For unspecified deadbolts, the "had no time" response was 18.8%, but "didn't agree" was given for 37.5% of these recommendations. This is by far the largest percentage of disagreement, and it is especially conspicuous in comparison with double-cylinder deadbolts. When officers specified double-cylinder deadbolts, there was only 7.9% disagreement, nearly five times less than the disagreement for unspecified deadbolt lock recommendations. These figures certainly offer support for the officers' preference of a double-cylinder deadbolt recommendation when either a single- or a double-cylinder deadbolt lock would provide the necessary security improvement.

Summary

The data on non-compliance show that 38.0% of the 50 respondents made no changes at all; another 60.0% made some changes, but did not comply with all their recommendations. Nearly three-fourths of the respondents said at least once that they had not had enough time to make a change, and almost one-third disagreed with at least one recommendation. A large percentage (71.4%) of the respondents indicated plans to make security changes.

Of the total number of recommendations made to these respondents, 70.1% were not complied with. For almost half (46.4%) of these recommendations, the respondents claimed to have had no time to make the change, but an even higher percentage (49.7%) said they planned to make a change.

The analysis of specific locations and devices showed that "had no time" was the most common response given in all instances except for the recommendation of an unspecified deadbolt lock, for which 37.5% of those who did not make a change said that they disagreed with the recommendation.

Individual Priority Analysis

The Eden Prairie Prioritized System

A conspicuous feature of the Eden Prairie premise survey program is its use of prioritized recommendations. Other police departments have conducted premise surveys by having officers hand recipients long and often confusing lists of recommendations without much attention given to the importance of each security deficiency.[12] A follow-up report done by one of these departments (the Golden Valley Police Department) found that compliance with its premise surveys

[12]See Appendix C for an example of recommendations prepared by another department.

was low and recommended curtailment of its program.[13]

The Eden Prairie premise survey is structured so that recommendations are listed in the order of importance, based on a burglar's most likely point of entry to each specific residence. Previous analysis in this report has shown that 62.0% of the Eden Prairie respondents made some type of change and that 29.0% of all the recommendations were changed. These figures are more encouraging than the compliance estimate in Golden Valley or the estimate in St. Paul, where two studies by the crime prevention unit suggested a 39.0% compliance.[14] One reason for Eden Prairie's higher compliance rating may be the prioritized system. The following section attempts to discover whether or not those surveyed are following the priorities in making changes.

[13]An in-person follow-up in Golden Valley found that 35.0% of the 160 people who had received premise surveys from eight to twelve months earlier had made some kind of change. The most popular "change," however, was joining Operation Identification; therefore, less than 35.0% had actual physical security changes. In Eden Prairie, all recipients of premise surveys already are members of Operation Identification. As a result, all changes made after Eden Prairie's premise surveys are actual physical changes.

[14]In the falls of 1973 and 1974, the St. Paul Crime Prevention Unit conducted telephone check-ups of a sample of their premise survey recipients. Each time 100 targets were reviewed, and each time it was found that approximately 39.0% of the people had made some kind of physical security change. A spokesman for the Crime Prevention Unit commented that he was surprised that the compliance rating was so high. In St. Paul, he explained, it has been difficult to get people even to request premise surveys, much less to get them to make security changes. He bemoaned the fact that most recipients of the 2,700 residential premise surveys conducted through May of 1976 had been burglarized previously. Nevertheless, the Unit is considering a third follow-up.

It should be noted that the compliance of those who have been burglarized previously is somewhat different from compliance before a burglary. The latter type of compliance might be considered more significant in that it is truly "preventive" in nature, whereas the former type is essentially "reactive."

One final point should be made in regard to the comparison of compliance ratings found in Golden Valley, St. Paul, and Eden Prairie. It is possible that the different methodologies of the follow-ups (in-person checks by officers in Golden Valley and telephone follow-ups in St. Paul versus questionnaires filled out by the Eden Prairie respondents) may have had a direct influence on the compliance ratings.

Individual Priority Compliance

If the respondents followed the prioritized recommendations in making their changes, it might be expected that compliance would be highest for priority one, and then decrease in the order of priority. Compliance figures for the individual priorities show that highest compliance (44.0%) was attained for priority one (see TABLE 2.18). The other priorities show a compliance range from 33.3% to 16.7%, but the anticipated decrease from priority to priority does not appear. The second highest compliance is found in priority six, and priority two has the second lowest compliance rating.

TABLE 2.18
COMPLIANCE RATINGS BY PRIORITY

	Priority 1 N = 50	Priority 2 N = 50	Priority 3 N = 49	Priority 4 N = 45	Priority 5 N = 34	Priority 6 N = 18	Priority 7 N = 6	Priority 8	Priority 9
Compliance Rating	44.0%	22.0%	28.6%	24.4%	23.5%	33.3%	16.7%	a	a

[a]Insufficient data.

It also might have been expected that if the prioritized recommendations were followed, the higher ranked (more important) priorities would be entertained before the lower ranked priorities. However, TABLE 2.19 shows that although priority one has highest compliance, it does not have the highest percentage of changes made within one month after the premise survey. Priorities two, three, and six show quicker changes, and, in fact, priority one shows a surprising delay with 14.3% of its changes being made from 4 through 12 months after the premise survey.

TABLE 2.19
TIME INTERVAL BEFORE CHANGES WERE MADE, BY PRIORITY
(months after Premise Survey)

	Priority 1 N = 21	Priority 2 N = 8	Priority 3 N = 12	Priority 4 N = 9	Priority 5 N = 7	Priority 6 N = 5	Priority 7	Priority 8	Priority 9
Less Than 1 Month	66.7%	75.0%	75.0%	55.6%	42.9%	80.0%	a	a	a
1 to 3 Months	19.0	25.0	12.5	33.3	57.1	---	a	a	a
4 to 12 Months	14.3	---	12.5	11.1	---	20.0	a	a	a

[a]Insufficient data.

The reasons for the irregularities in compliance figures are not clear from the data. Costs of making changes apparently have little relationship to these compliance ratings (see TABLE 2.20). It might be expected that high compliance and prompt changes would result from recommendations that are inexpensive to change. However, data show that priority one, with the highest compliance, has the highest percentage of changes made for more than $25.00. Priority six, with the second highest compliance, ranks second in changes over $25.00 and last in changes under $10.00.[15]

TABLE 2.20
COSTS OF MAKING CHANGES, BY PRIORITY

	Priority 1 N = 22	Priority 2 N = 10	Priority 3 N = 14	Priority 4 N = 10	Priority 5 N = 8	Priority 6 N = 6	Priority 7	Priority 8	Priority 9
Less Than $10	54.5%	40.0%	78.6%	50.0%	62.5%	16.7%	a	a	a
$10 to $25	27.3	50.0	7.1	40.0	25.0	66.7	a	a	a
More Than $25	18.1	10.0	14.2	10.0	12.5	16.7	a	a	a

[a]Insufficient data.

Other reasons for not making changes are shown in TABLE 2.21. Again some unexpected results appear. It might have been expected that the priorities with the highest compliance would be lowest in responses of disagreement with

[15]The wide variation in costs of making changes is surprising in light of the fact that for each priority the most often recommended device is the double-cylinder deadbolt lock.

the recommendation, perceived expense of the proposed change, and the lack of time to make a change. However, this is not always the case. Priority one (with highest compliance) is low in responses of disagreement, but it is relatively high in perceived-expense responses and is highest of all priorities in the lack-of-time response. Priority six (with second highest compliance) is the lowest in the lack-of-time responses, but it is highest in both the perceived-expense and disagreement responses. The final category of TABLE 2.21 provides some support for the strength of the priority system; the percentage of changes respondents plan to make is definitely highest at priorities one and two.

TABLE 2.21

REASONS FOR NON-COMPLIANCE AND PLANS FOR CHANGE, BY PRIORITY[a]

	Priority 1 N = 28	Priority 2 N = 39	Priority 3 N = 35	Priority 4 N = 34	Priority 5 N = 26	Priority 6 N = 18	Priority 7	Priority 8	Priority 9
Didn't Agree with Recommendation	7.1%	10.3%	7.0%	5.9%	19.2%	33.3%	b	b	b
Too Expensive	10.7	15.4	2.9	2.9	7.7	16.7	b	b	b
No Time to Make Change	57.1	48.7	42.9	47.1	42.3	33.3	b	b	b
Plan to Make Change	64.3	61.5	34.3	38.2	38.5	41.7	b	b	b

[a]Multiple responses possible.

[b]Insufficient data.

It has been mentioned that the prioritized system is designed to make the list of recommendations less overwhelming in hopes that people will concentrate on making the most important changes. Even with this system, however, it is possible that numerous security deficiencies are found, causing some recipients to have lengthy lists of recommendations. As a result, such people might have lower overall compliance, make fewer changes in full, or delay the changes because of so many to do. In order to test this hypothesis, comparative data for respondents with three to seven recommendations apiece are

presented in TABLE 2.22. As seen in row one, compliance shows no steady decrease as the number of recommendations increases. In fact, the highest compliance is found not among those with the fewest recommendations, but among those with six. This 43.6% compliance figure was obtained despite the group's low percentage of changes made for less than $10.00. Those with six recommendations made 47.1% of their changes for less than $10.00, compared with 54.5%, 73.3%, and 100.0% for those with four, five, and seven recommendations. The figures for recommended changes made remain consistently high as the number of recommendations increases, indicating that having more to change does not cause people to make changes of lower quality. The only category that suggests security action to suffer among those with more recommendations is the percentage of changes made within one month after the premise survey; understandably, as the number of recommendations increases, the percentage of changes made within a month decreases.

TABLE 2.22

COMPLIANCE RATINGS WITHIN VARIOUS GROUPS OF RECOMMENDATIONS

	Of Those With 3 Recommendations	Of Those With 4 Recommendations	Of Those With 5 Recommendations	Of Those With 6 Recommendations	Of Those With 7 Recommendations
	N = 12	N = 44	N = 75	N = 78	N = 35
Compliance	16.7%	27.3%	20.0%	43.6%	8.6%
	N = 2	N = 12	N = 15	N = 34	N = 3
Recommended Change Made	100.0%	91.7%	100.0%	93.9%	100.0%
Changed for Less Than $10	---[a]	54.5	73.3	47.1	100.0
Changed in Less Than 1 Month	100.0	71.2	60.0	58.8	33.3

NOTE: The data in TABLE 2.22 should be read as follows: for example, the 44 recommendations made to the respondents with 4 recommendations apiece received an overall compliance of 27.3%. Of the 12 changes made by these respondents, 91.7% showed full compliance, 54.5% were made for less than $10, and 71.2% were made within one month of the Premise Survey.

It might be thought that the respondents with large numbers of recommendations have a better opportunity to show high compliance than those with only a couple recommendations. As suggested by the nature of ranked priorities, longer lists of recommendations sometimes include less important recommendations. It is possible that respondents with longer lists could gain high compliance ratings by disregarding the top-ranked recommendations and by making their changes on the least important ones. Such compliance ratings, although statistically impressive, would be misleading. In the Eden Prairie data, the group with six recommendations has the highest compliance score, but it should not be held suspect. Further analysis shows that those with numerous recommendations did not make the least important changes at the expense of the top priorities. TABLE 2.23 shows that compliance on the first priority is highest for those with six recommendations. The first-priority compliance increases as the number of recommendations increases except for those with seven recommendations, but even this group (which had a low over-all compliance of 8.6%) shows high compliance on the first priority (see TABLE 2.23). In addition, nearly three-fourths of those with six priorities made their first changes on priority number one. (In every group the top-priority recommendations were among the first two changed.)

TABLE 2.23

COMPLIANCE BY PRIORITY WITHIN THE VARIOUS GROUPS OF RECOMMENDATIONS

	Those With 3 Priorities N = 4	Those With 4 Priorities N = 11	Those With 5 Priorities N = 13	Those With 6 Priorities N = 12	Those With 7 Priorities N = 5
Priority 1	25.0%	27.3%	38.5%	75.0%	40.0%
Priority 2	-0-	9.1	23.1	41.7	-0-
Priority 3	25.0	27.3	15.4	41.7	-0-
Priority 4	---	18.2	15.4	16.7	20.0
Priority 5	---	---	7.7	41.7	-0-
Priority 6	---	---	---	33.3	-0-
Priority 7	---	---	---	---	-0-

Summary

Compliance figures for the individual priorities show that highest compliance was obtained for the first priority. The anticipated decrease in compliance from the first priority to the final priority does not occur, however. The second highest compliance is found for priority six, and priority two has the second lowest compliance.

Although priority one has the highest compliance, it does not have the highest percentage of changes made within one month of the premise survey. Priorities two, three, and six show quicker changes. Reasons for non-compliance do not provide clues to the irregularities of priority compliance.

It is apparent that consistent patterns have not emerged to provide full support for the hypothesis that recipients of the Eden Prairie premise surveys are following the prioritized system in making their security changes. The data on plans for change and the compliance rating for priority one, however, do indicate some observance of the prioritized system.

The Compliance Hierarchy

Methodology

A different perspective on compliance is provided by grouping the respondents according to their levels of compliance. In order to perform such groupings, it at first was necessary to standardize the respondents' compliance activity.

Scores for the respondents were weighted to give more credit for changes made in full and for changes made in the order of priority. For example, a change made on a first priority recommendation received 18 points (the maximum

for first priority recommendations) for full compliance and 9 points for partial compliance. Second priority compliance received 16 points (the maximum for the second priority) for full and 8 points for partial. Third priority received 14 points (the maximum for priority three) for full and 7 for partial. The scoring progressing continued down to the ninth priority (which received 2 points for full and 1 for partial compliance) or as often as necessary to cover each respondents's total number of recommendations. The summation of each respondent's actual scores (the full and partial points received for each priority) then were divided by each respondent's maximum score,[16] rendering individualized compliance ratings.

The resultant percentages ranged from zero, received by the 19 respondents who made no changes whatsoever, to 100.0%, reflecting the complete compliance of 1 respondent. For this analysis, the respondents were divided into four levels of compliance: high compliance, medium compliance, low compliance and non-compliance.[17]

Compliance Findings

The following analysis examines the differences among the compliance groups' performances in making changes and their attitudes toward the premise survey program.

A critic might argue that these groupings are unfair, that there is a built-in bias toward those who have fewest recommendations. It is true, for example, that two changes made by respondents with three total recommendations would yield

[16]For the respondent with two priorities, the maximum score is 34 (18 points for priority one and 16 for priority two); for the respondent with three priorities, the maximum is 48 (18 + 16 + 14) and so forth up to the maximum score for nine priorities -- 90.

[17]High Compliance = all scores 51.0% and over.
Medium Compliance = scores from 31.0% through 50.0%.
Low Compliance = scores from 17.0% through 30.0%.
Non-Compliance = scores of zero.

a higher score than the same changes made by those with six recommendations.[18] However, TABLE 2.24 shows that the respondents in the "high compliance" category are not those with the lowest average number of recommendations. In fact, it is the other extreme, "non-compliance," that has the lowest average number of recommendations. Clearly the compliance levels are not the result of certain respondents having only a few recommendations.

TABLE 2.24
AVERAGE NUMBER OF RECOMMENDATIONS, BY COMPLIANCE LEVEL

	Non-Compliance	Low Compliance	Medium Compliance	High Compliance
Number of Respondents in Category	N = 18	N = 10	N = 11	N = 10
Average Number of Recommendations	4.7	5.1	5.5	5.4

Actual percentages of compliance within each level are shown in TABLE 2.25.

TABLE 2.25
COMPLIANCE RATINGS WITHIN EACH COMPLIANCE LEVEL

	Non-Compliance N = 89	Low Compliance N = 49	Medium Compliance N = 58	High Compliance N = 50
Compliance Rating	---	24.5%	46.6%	70.0%

This table shows four distinct compliance levels, with the 70.0% score in "high compliance" far above the other levels. This score is even more noteworthy in

[18]Computation: the respondent with three recommendations had a maximum possible 48 points. If he did the first two in full, his score is 34 of 48, or 71.0% (high compliance). The respondent with six recommendations has a maximum 78 points, and if he did the first two, his score is 34 of 78, or 44.0% (medium compliance).

light of additional data from the high compliance group. For example, the highest percentage of changes made with professional assistance occurs in the high compliance level (see TABLE 2.26).

TABLE 2.26

HOW CHANGES WERE MADE WITHIN EACH COMPLIANCE LEVEL

	Low Compliance N = 9	Medium Compliance N = 21	High Compliance N = 31
Made by Respondents Themselves	100.0%	90.5%	54.8%
Made with Professional Assistance	---	9.5	45.2

None of the "low" group's recommendations and just 9.5% of the recommendations in the "medium" category were changed by someone hired by the respondents, compared with 45.2% of those in the "high compliance" group. If earlier analysis of the costs of this professional assistance is remembered, it is apparent that the high compliance was achieved despite the higher costs incurred.

Not only were the changes of those in the high compliance group made more often; they also were made more quickly after the premise survey than were the changes of the other groups (see TABLE 2.27). The respondents in the high compliance group made 72.7% of their changes within one month of their surveys, compared with 60.0% of those in the low and 52.6% of the medium compliance groups.

TABLE 2.27

TIME INTERVAL BEFORE CHANGES WERE MADE, by COMPLIANCE LEVEL (months after Premise Survey)

	Low Compliance N = 10	Medium Compliance N = 19	High Compliance N = 33
Less Than 1 Month	60.0%	52.6%	72.7%
1 to 3 Months	30.0	10.5	9.1
4 to 12 Months	10.0	31.6	18.2
More Than 12 Months	---	5.3	---

Compliance scores for specific locations and devices are presented in TABLE 2.28, showing the differences among the compliance levels. In most cases, compliance increases from level to level. Three major locations (front, house to garage, and garage service doors) and three major devices (double-cylinder deadbolt, unspecified deadbolt, and channel locks) show increases from "low" to "high compliance." In all devices and all locations but the patio-sliding glass door, compliance is highest in the "high compliance" level.

It should be noted that all compliance levels received similar percentages of most locations and devices. Therefore, it is difficult to determine which locations or devices might have caused the "non-compliance" respondents to avoid making changes. The "non-compliance" group received a slightly higher than average number of front-door and double-cylinder deadbolt recommendations, but the "high compliance" group also received a higher than average number of double-cylinder deadbolts, and its compliance was 94.1%.

TABLE 2.28

CHANGES OF LOCATION AND DEVICE, BY COMPLIANCE LEVEL[a]

	NON-COMPLIANCE		LOW COMPLIANCE		MEDIUM COMPLIANCE		HIGH COMPLIANCE	
LOCATION	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Front Doors	N = 13	---	N = 8	12.5%	N = 7	28.6%	N = 6	100.0%
Patio-Sliding Glass Doors	N = 10	---	N = 7	71.4	N = 8	62.5	N = 8	50.0
House to Garage Doors	N = 8	---	N = 4	---	N = 4	50.0	N = 6	83.3
Garage Service Doors	N = 4	---	N = 5	---	N = 6	50.0	N = 6	83.3
Garage Overhead Doors	N = 9	---	N = 6	50.0	N = 9	44.4	N = 7	85.7
DEVICE								
Double-Cylinder Deadbolt Locks	N = 20	---	N = 13	7.7	N = 12	75.0	N = 17	94.1
Unspecified Deadbolt Locks	N = 6	---	N = 9	---	N = 7	28.6	N = 3	66.7
Channel Locks	N = 8	---	N = 4	50.0	N = 5	80.0	N = 7	85.7
Wire Mesh	N = 3	---	N = 3	33.3	N = 8	25.0	N = 3	33.3

[a]Only the most often recommended locations and devices are included.

Non-Compliance Findings

As was the case in earlier sections of the Eden Prairie Premise Survey evaluation, the reasons for non-compliance are examined. The category with the largest numbers of recommendations not complied with is, naturally, non-compliance. The totals in the other categories decrease as the compliance level increases (see TABLE 2.29). The "non-compliance" group shows the highest percentages of "too expensive" (12.4%) and "no time" (52.8%), but its 9.0% disagreement with the recommendation is the lowest of all compliance levels. In fact, the disagreement scores increase in each compliance level, from 10.3% in low compliance to 33.3% in high compliance. A somewhat reversed pattern is found in the "no time" responses, with percentages decreasing from over 50.0% in non-compliance to approximately 40.0% in both medium and high compliance. The results of "plan to change" show a 50.6% response for non-compliance and 56.4% for low compliance; the percentages then decrease in the higher compliance levels. Although the high compliance group has the lowest "plan to change" response (33.3%), it shows the highest response of "had an estimate." Responses for the other compliance levels are relatively low.

TABLE 2.29

REASONS FOR NON-COMPLIANCE AND PLANS FOR CHANGE, BY COMPLIANCE LEVEL[a]

	Non-Compliance N = 89	Low Compliance N = 39	Medium Compliance N = 34	High Compliance N = 15
Didn't Agree with Recommendation	9.0%	10.3%	23.5%	33.3%
Too Expensive	12.4	5.1	2.9	6.7
No Time to Make Change	52.8	46.2	38.2	40.0
Plan to Make Change	50.6	56.4	44.1	33.3
Had an Estimate	5.6	20.5	2.9	33.3

[a]Multiple responses possible.

From these responses it might be concluded that when few changes are made (non- and low compliance groups), the percentages of "no time" and "plan to change" are high, and the percentage of "disagree" is low. It is possible that those with higher compliance (medium and high compliance) are more likely to disagree with their unchanged recommendations. More probably, however, the propensity of the respondents to disagree with a recommendation is fairly equal, and the high percentages of disagreement result from differences among the compliance levels in the categories of "no time" and "plan to change." The respondents in the higher compliance levels apparently find the time to make the changes they had planned to make, and their corresponding percentages of non-compliance drop. The remaining recommendations, those that cause disagreement, simply are the least likely ever to be changed. In the higher compliance levels, this residual group appears larger in proportion to the smaller number of unchanged recommendations.

Respondents' General Attitudes Toward Premise Surveys

General attitudes toward the premise surveys were discussed in the introductory "profile" of the respondents. The following two tables examine the differences in the attitudes of respondents in the low, medium, and high compliance levels.

The majority of all respondents felt that their premise surveys were informative. One person remarked that his premise survey informed him of so much that he wouldn't have purchased his house if he had known of all its security deficiencies before hand. Even those who made no changes were favorably impressed with the information provided and show a 94.1% positive response (see TABLE 2.30).

TABLE 2.30

WAS THE PREMISE SURVEY INFORMATIVE?

	Non-Compliance N = 17	Low Compliance N = 10	Medium Compliance N = 9	High Compliance N = 10
"YES"	94.1%	100.0%	88.9%	90.0%

The responses of those who made changes indicate that the respondents with high compliance have the highest percentage of "feel more secure" (see TABLE 2.31). The other respondents also show high feelings of security. In regard to cost effectiveness, the high compliance group does indicate that its changes were somewhat more costly, but in general the results are fairly even in all compliance levels. The lower portion of the table shows that the primary motivation for the changes of those in the low and medium compliance groups was a "personal" concern for themselves and their families. For those with high compliance, however, an equal emphasis on personal and property concerns is apparent.

TABLE 2.31

QUESTIONS FOR THOSE WHO MADE CHANGES

	Low Compliance N = 7	Medium Compliance N = 7	High Compliance N = 9
NOW THAT YOU HAVE MADE THE CHANGES, HOW SECURE DO YOU FEEL?			
"Feel More Secure Than Before Changes Were Made"	85.7%	85.7%	100.0%
WERE THE RECOMMENDATIONS COST-EFFECTIVE?			
"Not Too Expensive"	71.4%	71.4%	55.6%
"Expensive, But Not Unreasonable"	28.6	28.6	33.3
"Too Expensive"	---	---	11.1
WHY DID YOU MAKE THE RECOMMENDED CHANGES?			
"Personal Concerns"	57.1%	85.7%	44.4%
"Equal Emphasis -- Personal and Property"	42.9	---	44.4
"Property Concerns"	---	14.3	11.1

Summary

When grouped into levels of compliance, it was found that the average number of recommendations per respondent was fairly equal; those in the "non-compliance" level had the lowest average number of recommendations (indicating that they were not overburdened), and those in the "high compliance" level had the second highest average (indicating that they had no unfair advantage of a low number of recommendations).

The most noteworthy findings of the compliance hierarchy analysis are those of the highest compliance level. These respondents not only made more changes

than those in the other levels, but also they more often paid to have changes made (despite the higher costs incurred) and made more changes within a month of the survey.

The analysis of specific locations and devices showed that each compliance level received similar percentages of most locations and devices, suggesting that those with non-compliance were not asked to make more difficult changes and that those with high compliance did not receive an abundance of simple recommendations. In fact, both "non" and "high" compliance groups received a slightly higher than average number of double-cylinder deadbolt lock recommendations, but their difference is seen in non-compliance's lack of change and high compliance's 94.1% compliance.

The analysis of reasons for non-compliance suggests that respondent's with low compliance tend to give higher percentages of "had no time" and "plan to change" than do the respondents of high compliance. High compliance respondents showed a larger percentage of disagreement with the recommendations, but this is probably because they have found the time to make the changes they had planned, leaving them with those they never intended to do in the first place.

General attitudes toward premise surveys are fairly similar among the compliance levels, with the majority of all groups saying that the surveys were informative. The respondents in the high compliance group showed slightly stronger feelings that they were more secure after making the changes, that the changes were expensive, and that equal emphasis on personal and property concerns led them to make changes.

SECTION 3: OPERATION IDENTIFICATION ACTIVITY

The Maintenance of Current Enrollment

One section of the premise survey follow-up questionnaire was designed to obtain information on the maintenance of current enrollment in Operation Identification, the burglary prevention program sponsored by Minnesota Crime Watch.[19] Members of Operation Identification keep their enrollments current by marking property acquired after the original sign-up process.

Few evaluation reports have gone beyond the theoretical in regard to this dimension of the property identification programs. Although it is not a crucial aspect of their early enrollment stages, the maintenance of current enrollment is vital to the future of such programs. In theory, the effectiveness of Operation Identification as a burglary deterrent results from the fact that personal property is marked with a unique number able to be recognized by law enforcement agencies throughout the country. It is believed that such markings make the property less attractive to burglars by making it more difficult to fence and by increasing the likelihood of arrest and conviction of those found in possession of another person's marked property. With debate over the actual effectiveness aside, it is clear that the marking of property is the basis of the program.

As time passes, however, it becomes increasingly likely that some of the marked property wears out, is destroyed, sold, or otherwise discarded, and is replaced by new, unmarked property. Also, most people will purchase new items over the years. If these additional items are not marked, it is likely that a

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[19]For a detailed description of Operation Identification, see Minnesota Crime Watch, an evaluation report prepared by the Evaluation Unit of the Govenor's Commission on Crime Prevention and Control in May, 1976.

significant proportion of the household inventory will be without the identification protection. If a significant number of members neglect to mark these items, the possibility exists that within a few years the Operation Identification warning stickers will become meaningless, with burglars confident that at least some valuable merchandise is not marked. In order to avoid such a result, organized efforts on the part of law enforcement agencies to inform the public and to make extra engravers and personal scribers[20] available for repeated use will probably be necessary.[21] Without a full effort from the participating law enforcement agencies and citizens, it is likely that the effectiveness of the program will fade like its stickers in the sun.

It was considered appropriate to ask for information on this dimension of Operation Identification because most recipients of premise surveys in Eden Prairie were already members of Operation Identification. Since these people had not only joined Operation Identification but also had requested premise surveys, they are probably more security-conscious than most citizens, and quite likely they are above average in taking security precautions and maintaining current Operation Identification enrollment. Therefore, if these people do not indicate a propensity toward marking newly acquired property, it could be expected that few people would. As was the case for premise survey results, the Operation Identification results should be viewed with this report's introductory qualifications in mind.

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[20]A scriber is a fountain pen-like device capable of marking most any surface. Operation Identification participants usually borrow regular engravers from their law enforcement agencies, but personal scribers, which sell for approximately $2.00 (half the price of regular engravers), are intended to be sold to participants so that they can mark all new property immediately.

[21]Recommendations made in the Minnesota Crime Watch evaluation report suggest that brochures and engraving instruments be made available at retail outlets so that valuable property can be engraved at the time of purchase.

Of those who answered the question, "How important do you feel it is to mark your newly acquired property?" 47.7% replied that is is very important, and 36.4% said that it is extremely important. Everyone indicated that it is at least somewhat important to mark newly acquired property (see TABLE 3.1).

TABLE 3.1

"HOW IMPORTANT DO YOU FEEL IT IS TO MARK YOUR NEWLY ACQUIRED PROPERTY?"

	N = 44
Extremely Important	36.4%
Very Important	47.7
Somewhat Important	15.9
Not Important	---

TABLE 3.2 shows that 48.8% of the respondents had acquired valuable property since their initial enrollments. Although 85.7% of these respondents indicated that marking this property is very-extremely important, less than half (45.0%) actually had marked their property.

TABLE 3.2

ACQUISITION AND MARKING OF PROPERTY SINCE ORIGINAL ENROLLMENT IN OPERATION IDENTIFICATION

	Property Acquired N = 43	Property Marked N = 20
Yes	48.8%	45.0%
No	51.2	55.0

The differences between those who had and those who had not acquired property in their feelings on the importance of marking property suggest that as people acquire property, the importance of marking it increases. Only 27.3% of

those who had not acquired property felt it extremely important, but 47.6% of those who had acquired property felt that way (see TABLE 3.3).

TABLE 3.3

FEELINGS OF IMPORTANCE, BY ACQUISITION AND MARKING OF PROPERTY

	Property Acquired N = 21	No Property Acquired N = 22	Property Marked N = 9	Property Not Marked[a] N = 11
Extremely Important	47.6%	27.3%	44.4%	45.5%
Very Important	38.1	59.1	33.3	36.4
Not Important	14.3	13.6	22.2	18.2

[a]81.8% said they would have marked their property if they had owned a marking instrument.

Also, it is somewhat surprising that feelings of importance were slightly higher among those who had not marked property than among those who had. This perhaps is encouraging in that these feelings may inspire these people to mark their property. In support of this possibility, 81.8% of those who had not marked property said they would have if they had owned a marking instrument.[22] However, at least one respondent suggested that people would mark items more quickly if they borrowed engravers from the police department, thereby being obligated to return the equipment as soon as possible.

The results suggest that people are aware of the importance of marking property acquired after original enrollment. The results on actual marking, however, foretell the need for future efforts to get members to maintain current enrollment. Perhaps making personal scribers available to all members would increase actual marking of property, which, after all, is a precondition

[22]Electric engravers and pen-like scribers are available for purchase from most member law enforcement agencies.

to the success of the program.[23]

The Relationship of Premise Survey Compliance and Property-Marking Activity

Many officers involved in crime prevention consider enrollment in Operation Identification to be a basic crime prevention practice. More advanced crime prevention activity includes participation in a premise survey program and the practice of keeping Operation Identification membership current by marking property acquired after original enrollment. In that these two activities are somewhat related, there is the possibility that those who take security precautions are those most likely to keep their Operation Identification enrollments current. If this is so, the extent of property-marking activity should increase in the higher compliance levels, which were developed in an earlier section of this report. Such a comparison is shown in TABLE 3.4. The results show that a majority of respondents in each compliance level feel that it is important to mark property acquired after original enrollment in Operation Identification. The range of those who had acquired property since their original enrollments is from 33.3% in low compliance to 62.5% in medium compliance.

The figures for the actual marking of this property bear little resemblance to the other figures. The data indicate that feeling it is important to mark property does not guarantee that the property will be marked. Moreover, the correlation between marking activity and compliance with the premise survey recommendations does not appear (perhaps because of the small data base). Apparently, the premise survey compliance of Operation Identification members is not a satisfactory predictor of whether or not these people keep their enrollments

[23]The Minnesota Crime Watch project recently conducted an experimental distribution of personal scribers in Minneapolis, St. Louis Park, and Olmsted County. These experiments currently are being evaluated at the Governor's Commission on Crime Prevention and Control.

current.

TABLE 3.4

ATTITUDES, ACQUISITION, AND ACTUAL MARKING OF PROPERTY WITHIN COMPLIANCE LEVELS

	Non-Compliance N = 17	Low Compliance N = 9	Medium Compliance N = 8	High Compliance N = 10
Percent who feel it is important to mark property acquired after original Operation Identification enrollment	88.2%	100.0%	62.5%	80.0%
	Non-Compliance N = 16	**Low Compliance N = 9**	**Medium Compliance N = 8**	**High Compliance N = 10**
Percent who have acquired property since their original enrollment	50.0%	33.3%	62.5%	50.0%
	Non-Compliance N = 8	**Low Compliance N = 2**	**Medium Compliance N = 5**	**High Compliance N = 4**
Percent who actually have marked this property	37.5%	50.0%	80.0%	25.0%

The Effects of Premise Survey Compliance on Burglary

When this follow-up study was conceived, it was not expected that the premise survey sample would yield much data on burglary. After all, the sample is relatively small (102 questionnaires were delivered) and the burglary rate in Eden Prairie was a relatively low 910.5 per 100,000 residents in 1975 (BCA figure). Moreover, it is believed that the homes of those who have made security changes after a premise survey are even less likely to be burglarized than the average home. Nevertheless, it was considered worthwhile to determine which residences

in this group had been victims of burglary.

Analysis shows that 5 (11.6%) of the 43 respondents to the burglary questions had experienced a burglary of their homes at some time (see TABLE 3.5).

TABLE 3.5

BURGLARY IN RELATION TO JOINING OPERATION IDENTIFICATION AND THE PREMISE SURVEY PROGRAM

	N = 43
Percent Burglarized Anytime in the Past	11.6%
Percent Burglarized After Moving to Eden Prairie	9.3%
Percent Burglarized Before Joining Operation Identification	4.7%
Percent Burglarized After Receiving Premise Survey	4.7%

One person had his home burglarized three times. Only 4 respondents, however, had their homes burglarized after living in Eden Prairie. Two people were "victims" before they joined Operation Identification; one joined a month later, and one joined 18 months later. The other two residences were burglarized after hosting a premise survey. One house, burglarized two months after its survey, had had five security defects cited by inspecting officers, but no changes had been made. The other, burglarized three months after its survey, had received six citations. Four changes were made, but only one had been changed before the burglary.

The data here are insufficient to draw major conclusions. Unfortunately, this type of data is conspicously absent from most other crime prevention reports. Clearly, more research is necessary to determine the premise survey's impact on burglary.

Summary

The analysis of the respondents' maintenance of current Operation Identification enrollment showed that 85.7% felt it important to mark property acquired after original enrollment, but less than half actually had marked their property. A majority (81.8%) of those who had not marked their property said that they would have if they had owned a marking instrument.

Other data suggested that people with high premise survey compliance are no more likely than those with low or non-compliance to keep their Operation Identification enrollments current.

Finally, it should be noted that the data base for the analysis of premise survey compliance's relationship to maintaining current enrollment was small and that further research is necessary before the relationship is known. Even more research is needed to determine the effects of premise survey compliance on burglary.

SECTION 4: CONCLUSIONS AND RECOMMENDATIONS

Compliance

Of the 50 respondents:

-- *62.0% made some kind of security change as a result of the premise survey; 41.9% made two changes and 29.0% made three or more.*

-- *all 62.0% made some change in full compliance with the inspecting officers' recommendations; and 83.9% of those who made changes made all of their changes in full compliance.*

-- *83.9% of those who made changes made at least one change by themselves.*

-- *87.2% made at least one change for less than $10.00.*

-- *77.4% made at least one change within a month of their premise surveys.*

Of the 255 recommendations:

-- *29.0% elicited security changes (the overall compliance rating of the 31 respondents who made changes was 47.7%).*

-- *95.5% of the changes were made with full compliance.*

-- *73.8% of the changes were made by the respondents themselves (with no outside assistance).*

-- *54.2% of the changes were made for less than $10.00. (No changes made by the respondents themselves cost more than $25.00.)*

-- *67.9% of the changes were made within one month of the premise survey. Even for the changes of more than $25.00, the majority was changed within a month.*

The analysis of the specific locations and devices of the changes showed that:

Location:

-- *front doors and patio-sliding glass doors each received 16.6% of the recommendations, which was the highest percentage for any location.*

-- compliance on the patio-sliding glass door recommendations was 41.2%, the highest compliance for any location.

-- the front door compliance figure of 26.5% was the second lowest for any location.

Device:

-- the device most often recommended (31.3% of the time) was the double-cylinder deadbolt lock.

-- compliance is highest for "charlie bar" recommendations (77.8% compliance), followed by channel locks (42.9%) and double-cylinder deadbolt locks (39.7%).

-- 85.7% of the charlie bars and 80.0% of the channel locks were changed within the first month of the premise survey, compared with 50.0% of the double-cylinder deadbolt locks.

The analyses of location and device point to several recommendations for the Eden Prairie premise survey program.

First, the inspecting officers perhaps should give the public more instruction about the most common points of entry in residential burglary. The officers' concern over the front door is reflected by the fact that this location is one of the two most frequently cited in their lists of recommendations for security changes. Compliance with front-door recommendations, however, was found to be the second lowest of any location.

Second, the patio-sliding glass door is the other most frequently cited location, and the devices most often recommended to secure this door are key-operated locks and charlie bars. Considering that the compliance rating for charlie bars is nearly four times higher than that for key-operated locks, it seems appropriate that charlie bars be recommended whenever possible in an effort to increase compliance.

Third, the data showed that double-cylinder deadbolt locks have been the most common recommendation for all doors, except patio-sliding glass and garage overhead doors. The device recommended next most often is an unspecified deadbolt lock. Compliance with double-cylinder deadbolt recommendations was 39.7%, compared with 16.0% for unspecified deadbolt recommendations. Perhaps the specific mention of a double-cylinder lock made the change seem more important, or perhaps the lack of specification on the type of lock caused confusion over what to do. Whatever the reason, the data suggest that compliance would be increased at most house and garage doors by the specific recommendations of double-cylinder deadbolt locks.

Fourth, recommendations for lower house windows and for garage windows most often call for the use of wire mesh. The compliance figure for wire mesh is the lowest of all those examined; perhaps alternatives to wire mesh

should be given more consideration.

Non-Compliance

Of the 50 respondents:

-- 38.0% made no change whatsoever. Another 60.0% made some changes but did not comply with all of their recommendations.

-- 71.4% cited "no time to make the changes" as the reason for not making at least one change; 44.9% gave this reason for more than one recommendation.

-- 14.3% indicated that at least one of their recommended changes would be too expensive to make.

-- 71.4% plan to make at least one change, and 24.5% had had an estimate made for at least one recommendation.

Of the 181 unchanged recommendations:

-- the most popular reasons for non-compliance was "had no time," cited 46.4% of the time.

-- "too expensive" was mentioned the least -- 8.3% of the time.

-- for 49.7% of their unchanged recommendations, the respondents indicated plans for change, although only 10.5% had received estimates of cost.

The analysis of location and device showed that:

-- unspecified deadbolt-lock recommendations generated the highest percentage of disagreement with the officers' recommendations. The 37.5% disagreement of unspecified deadbolts is nearly five times higher than the disagreement with double-cylinder deadbolt lock recommendations, offering support for the aforementioned program suggestion that the officers maintain a definite preference for double-cylinder deadbolt recommendations.

-- key-operated locks received the lowest figure for "plan to change," which reinforces the earlier suggestion that key-operated lock recommendations be replaced by charlie bar recommendations whenever possible.

Individual Priority Analysis

Compliance figures for the individual priorities indicated that:

-- *priority one had the highest compliance rating of any priority (44.0%). Priority two shows the second lowest compliance rating, and the compliance figures for the other priorities show a similar disregard for the prioritized system.*

-- *although priority one has highest compliance, it does not have the highest percentage of changes made within one month of the premise survey. Priorities two, three, and six received more immediate attention.*

When the respondents were grouped according to the number of recommendations they had received, it was found that:

-- *compliance shows no steady decrease as the number of recommendations increases. The highest compliance found in this analysis was for those with six recommendations (43.6% compliance) despite this group's low percentage of changes made for less than $10.00.*

-- *the priority system was best followed by those with five and six recommendations. Those with six recommendations had the highest compliance rating for the first priority, which at 75.0% is nearly twice that for any other group.*

The data gathered for this report suggests that premise survey compliance in Eden Prairie is considerably higher than compliance in the cities of St. Paul and Golden Valley. It is not clear, however, whether or not it is the Eden Prairie prioritized system that is making the difference. (Other factors that may have influenced the Eden Prairie results are discussed in the introduction to this report.) The prioritized system shows some degree of success in that the priority-one recommendations have had the highest compliance, although the rest of the data is not as clear-cut in support of the system.

It is recommended that Eden Prairie continue its prioritized system for the following reasons:

-- *it is quite possible that this system has increased overall compliance.*

-- *the data suggest that this system is successful in directly motivating people to make the most important changes.*

It should be noted that the system appears to be most successful when five or six recommendations are given to the premise survey recipients. This suggests that the officers are able to prescribe a fairly large number of recommendations, when necessary, without fear that the recipient will be overwhelmed into non-compliance.

The Compliance Hierarchy

From the analysis of the compliance hierarchy, it was found that:

-- *receiving a "high compliance" rating was not the result of having a low number of recommendations. The average number of recommendations for the high compliance group was 5.4, compared with 5.1 for all 50 respondents and 4.7 for the non-compliance group.*

-- *the high compliance group had the highest percentage of:*

  - *changes made by someone hired to do the work (which resulted in a higher cost than for the changes done by the respondents themselves) -- 45.2%;*

  - *changes made within one month of the premise surveys -- 72.7%.*

-- *all compliance levels received similar percentages of most specific locations and devices. It therefore is difficult to determine from this analysis whether or not certain devices or locations inherently inhibit compliance. For example, the double-cylinder deadbolt recommendations had only a 7.7% compliance in the low compliance group, but in the high compliance group, the rating was 94.1%. One finding from this analysis supports the earlier recommendation in favor of double-cylinder deadbolt locks; in all groups, compliance with double-cylinder recommendations was higher than for unspecified deadbolt recommendations.*

-- *only slight differences were found among the compliance levels in regard to their premise survey attitudes, with the high compliance group indicating somewhat stronger feelings of security and expense.*

The Maintenance of Current Enrollment

The analysis of the maintenance of current Operation Identification enrollment showed that:

-- *although 48.8% of the respondents had acquired property since their original enrollments, and*

-- *85.7% said that it is "very" or "extremely" important to mark this property,*

-- *less than half -- 45.0% -- actually had marked the property.*

-- *there is no strong relationship between premise survey compliance and property marking activity.*

Analysis of this aspect of the Operation Identification program is nearly non-existent. However, many Operation Identification memberships will soon be three years old or more, and as time passes and more property is acquired, Minnesota Crime Watch will find it necessary to stress the importance of current enrollment to its member law enforcement agencies and, in turn, to the Operation Identification participants.

Moreover, Minnesota Crime Watch and its member agencies will have to develop a satisfactory way of measuring this activity. The results of this analysis suggest that people's compliance with premise survey recommendations is not a satisfactory predictor of whether or not the same people are keeping their Operation Identification enrollments current. Until a satisfactory measure is developed, the knowledge of participants' activity will be lower than that of premise survey compliance, which is itself still in need of substantial research.

Burglary and Premise Surveys

The analysis of burglary's relationship to the premise survey led to one major conclusion -- that extensive research is needed. Further analysis should consider whether or not actual burglaries of citizen's homes and businesses have motivating effects in getting them to ask for premise surveys or in getting them to make changes if they had not done so after their surveys. Also, research should be directed at the effectiveness of premise surveys in

preventing burglary. Ideally, the researchers would examine burglaries and attempted break-ins at participating targets to determine what points of entry were chosen, and to see if changes had been made at these or any locations. The data base in Eden Prairie is hopelessly small for this type of analysis, but successful research could be conducted in larger cities with active premise survey programs.

General Conclusions

In addition to the conclusions and recommendations regarding specific locations and devices recommended, some general observations are appropriate. The Eden Prairie premise survey program seems to be well-received in Eden Prairie. Citizens' comments within the follow-up questionnaire responses were overwhelmingly in favor of the Department's handling of the program. Whether this is a result of the premise survey concept itself or of the Department's approach to "selling" its citizens on crime prevention is not clear from the data.

It also is not clear what effect the Department's "sales approach" has had on overall compliance. It is possible that the sales approach has not been as effective as it could be or that some other method would be more successful at motivating people to make security changes. However, it is just as likely that the Department is performing as well as it can. Certainly the officers have been able to elicit high-quality changes among those who have been responsive to their program.

This report makes it clear that there is a need for more research in regard to premise survey compliance both in Eden Prairie and elsewhere. The present findings in Eden Prairie suggest that the Department should continue

its residential premise survey program. (It is possible that an added effort directed toward business establishments and other non-residential targets would have equal success.) While considering this report's earlier-mentioned suggestions concerning location and device, the Department should encourage changes that can be done quickly and by the respondents themselves. Present data indicate that by doing so the recommendations will be kept at minimal cost and will be done in full compliance with the officers' recommendations.

It must be remembered, however, that research for the purpose of determining compliance ratings is not an end in itself. Compliance ratings will have their full value only when the actual deterrent effect of "target hardening" (making security changes) is statistically documented. Unfortunately, data on the premise survey's relationship to burglary are next to non-existent. Departments offering premise survey programs should definitely be concerned with their compliance ratings, but they also should attempt to determine what impact their programs -- and the security changes made -- have on the problem of burglary.

On the whole the Eden Prairie compliance is commendable. With the qualifications of the first chapter in mind, other law enforcement agencies considering starting or modifying their own premise survey activities should consider the Eden Prairie effort as a model program.

APPENDIX A

THE EDEN PRAIRIE PREMISE SURVEY FOLLOW-UP QUESTIONNAIRE

PREMISE SURVEY QUESTIONNAIRE

Name: _____

Address: _____

Please answer the following questions by marking an "X" in the appropriate blank. It should only require 15 to 20 minutes of your time to complete. Your comments are also welcome.

Since the success of this study depends upon your cooperation, we sincerely hope you will complete this questionnaire and return it to us. Enclosed is a return, stamped envelope for your convenience.

Responses to this survey are anonymous; before returning the questionnaire, please remove this instruction sheet.

SECTION I

TYPE OF STRUCTURE: _____

DATE OF PREMISE SURVEY: _____

NUMBER OF PRIORITIES LISTED: _____

PRIORITY #1: Location of recommendation: _____

Device recommended: _____

1) Was any change made in this location? (Please answer the questions in the appropriate box.)

If Yes:

a) What change was made? _____

If other than recommended change, please give reason for other _____

b) Who made the change?
- ___1) yourself
- ___2) paid to have it done
- ___3) other

c) Approximate cost of change:
- ___1) less than $10.00
- ___2) $10.00 - $25.00
- ___3) $25.01 - $50.00
- ___4) $50.01 - up

d) How long after the survey was the change made?
- ___1) less than 1 month
- ___2) 1 - 3 months
- ___3) 4 - 12 months
- ___4) over 1 year

If No:

a) Reason for not making change: (Choose all that apply)
- ___1) Didn't agree with recommendation
- ___2) Haven't had time to make change
  Do you plan to make change?
  - ___a) Yes
  - ___b) No
- ___3) Making change would be too expensive
- ___4) Other (please state):_____

b) Have you had an estimate for making change?
- ___1) Yes
- ___2) No

PRIORITY #___: Location of recommendation: _____

Device recommended: _____

1) Was any change made in this location? (Please answer the questions in the appropriate box.)

If Yes:

a) What change was made? _____

_____

If other than recommended change, please give reason for other ____

_____

_____

b) Who made the change?
___1) yourself
___2) paid to have it done
___3) other

c) Approximate cost of change:
___1) less than $10.00
___2) $10.00 - $25.00
___3) $25.01 - $50.00
___4) $50.01 - up

d) How long after the survey was the change made?
___1) less than 1 month
___2) 1 - 3 months
___3) 4 - 12 months
___4) over 1 year

If No:

a) Reason for not making change: (Choose all that apply)
___1) Didn't agree with recommendation
___2) Haven't had time to make change
Do you plan to make change?
___a) Yes
___b) No
___3) Making change would be too expensive
___4) Other (please state):_____

_____

_____

b) Have you had an estimate for making change?
___1) Yes
___2) No

PRIORITY #___: Location of recommendation: _____

Device recommended: _____

1) Was any change made in this location? (Please answer the questions in the appropriate box.)

If Yes:

a) What change was made? _____

_____

If other than recommended change, please give reason for other ____

_____

_____

b) Who made the change?
___1) yourself
___2) paid to have it done
___3) other

c) Approximate cost of change:
___1) less than $10.00
___2) $10.00 - $25.00
___3) $25.01 - $50.00
___4) $50.01 - up

d) How long after the survey was the change made?
___1) less than 1 month
___2) 1 - 3 months
___3) 4 - 12 months
___4) over 1 year

If No:

a) Reason for not making change: (Choose all that apply)
___1) Didn't agree with recommendation
___2) Haven't had time to make change
Do you plan to make change?
___a) Yes
___b) No
___3) Making change would be too expensive
___4) Other (please state):_____

_____

_____

b) Have you had an estimate for making change?
___1) Yes
___2) No

SECTION II

1) Was the survey informative; i.e., did the officer tell you of any security techniques that you were not aware of?

___a) Yes
___b) No

If you have made any home security improvements as a result of the premise survey, please answer questions 2) through 5). If you have not made any changes, please skip to question 5).

2) Now that you have made security improvements since the survey, how secure do you feel about your home?

___a) Much more secure than before
___b) More secure than before
___c) As secure as before
___d) Less secure than before

3) Were the recommendations made by the officer "cost-effective"? In other words, did the cost of purchasing and installing these devices seem too expensive when compared to the security they provided?

___a) Not too expensive
___b) Expensive, but not unreasonable
___c) Too expensive
___d) Much too expensive

4) For what reasons (protection of your family and person or protection of your property) did you make the recommended changes?

___a) Mostly personal
___b) More personal than property
___c) Equal emphasis on personal and property
___d) More property than personal
___e) Mostly property

5) Please share your opinions, both positive and negative, regarding the contact you had with the Public Safety Department during the premise survey. Also include any suggestions you have for improving future surveys.

SECTION III

1) When did you enroll in Operation Identification? (Please estimate to the best of your recollection.)

_____
(month/year)

2) How important do you feel it is to mark your newly acquired property?

___a) Extremely important
___b) Very important
___c) Somewhat important
___d) Not important

3) Have you acquired any personal property that you feel should be protected with your Operation Identification number since enrolling in the program?

___Yes ___No

If Yes:

a) Have you marked this property with your Operation Identification number?
   ___1) Yes
   ___2) No
b) If you had your own marking instrument, would you have marked this recently acquired property?
   ___1) Yes
   ___2) No

4) Has your home ever been burglarized (includes break-ins and attempted burglary)?

___Yes ___No

If Yes:

a) How many times? _____
b) When did the burglary occur? (Check all that apply)
   ___1) Before moving to Eden Prairie?
   ___2) After moving to Eden Prairie?
   ___3) Before joining Operation Identification?
   How long before:_____months
   ___4) After joining Operation Identification, but before having a premise survey performed?
   How long before survey:____months
   ___5) After having the premise survey performed?
   How long after survey:_____months

Your cooperation in filling out this questionnaire is sincerely appreciated. From the information gained here, we hope to further improve these surveys and other crime prevention programs and thus reduce criminal opportunity.

APPENDIX B

THE EDEN PRAIRIE PREMISE SURVEY SHEET OF RECOMMENDATIONS

Department of Public Safety
Eden Prairie, Minn.

Residential Premise Survey For:

NAME:_____ ADDRESS:_____

OWNERS ADDRESS:_____ OWNERS PHONE:_____

DESCRIPTION OF BUILDING

1) (x) single family ( ) duplex ( ) apartment
2) (x) viewable front ( ) viewable back ( ) isolated
3) (x) 1-floor ( ) 2-story ( ) 3-story ( ) 4-story
4) (x) garage attached ( ) garage unattached ( ) carport
5) ( ) basement ( ) crawl space
6) ( ) attic ( ) crawl space

EXISTING SECURITY

7) WINDOWS: (x) thumb latch ( ) nailed ( ) no latch ( ) other_____
( ) metal ( ) wood ( ) screens ( ) shutters ( ) window A/C
DOORS: (x) spring latch ( ) hasp ( ) double cylinder ( ) single cylinder ( )other
(x) hollow core ( ) solid core ( ) metal ( ) wood ( ) good frame
( ) weak frame (x) hinges inside ( ) hinges outside ( ) glass in door

GARAGE DOOR: (x) throw bolt ( ) hasp ( ) padlock ( ) other_____
( ) solid door ( ) glass in door

SLIDING GLASS DOORS: (x) flip latch () dead latch () pin () track lock () charlie bar

ALARM: ( ) perimeter ( ) space ( ) target ( ) fire MAKE N/A

OUTSIDE LIGHTING: front-type_____
location_____
rear- type Not Applicable
location_____

GROUNDS DESCRIPTION; ( ) trees ( ) shrubs ( ) hedges

FENCE: ( ) metal ( ) wood ( ) brick ( ) open ( ) privacy

key control used_____ Operation I.D. used Yes

COMMENTS

The following suggestions are made in the order of their importance:

1. Lower Level Sliding Door: Install a key operated lock
2. Garage Walk Door: Install a double cylinder deadbolt lock
Retain existing locks for emergency exit.
3. Overhead Garage Door: Use a long shackle padlock in the guide track when away from home for extended periods.
4. House to Garage Door: Same as item #2.

5. Front Door: Same as item #2.
6. Upper Level Sliding Door: Same as item #1.
7. Install a smoke detection alarm in bedroom hallway.
8. Check with your house contractor to determine the brand of existing locks so that the double cylinder locks can be keyed the same.

Thank you for participating in Operation I.D. and showing an interest in crime prevention.

NAME OF OFFICER:_____ DATE:_____

APPENDIX C

ANOTHER DEPARTMENT'S PREMISE SURVEY

SHEET OF RECOMMENDATIONS

CRIME PREVENTION UNIT
HOME SECURITY CHECK-LIST

Name_____ Phone_____
Last First M.I.

Street_____ Zone_____

Zip_____ Inspected By_____ Date_____

Building Type: Single_____ Apartment_____ Other_____

S-Satisfactory U-Unsatisfactory PIN Signed up

DOORS			RECOMMENDATIONS
1. Main Entrance-South	S	U	Door #'s 1, 3, & 4 should all be replaced
2. Side-Into garage	S	U	with a solid wood core or metal door. Door
3. Back-North	S	U	#'s 1, 2, 3, & 4 should all be equipped with
4. Basement	S	U	a good double cylinder deadbolt lock that
5. ~~Sliding~~	S	U	has a bolt throw of 1" & is equipped with
6. Garage	S	U	cylinder guards. Strike plates for these
7. Other	S	U	four doors should be 4" in length & held by a minimum of 4 screws that extend at least 1" into the stud behind the door jamb.
WINDOWS			**RECOMMENDATIONS**
8. ~~Double Hung~~	S	U	Hinges should be pinned on all doors & wide
9. ~~Sliding~~	S	U	angle viewers should be installed on #'s 1
10. Basement	S	U	& 3, optional on the others. The window
11. ~~Louver~~	S	U	adjacent to door #1 should be replaced with
12. Other (Crank-out)	S	U	lexan or some other similar type, unbreakable
13. Lighting	S	U	plastic instead of the glass. The #6 doors should first of all be curtained, making it
14. Shrubbery	S	U	impossible to see a car in the garage. A
15. Alarm System	Yes	No	canebolt or a padlock should also be installe
16. Misc. Opening	S	U	on the inside so that you can secure these

RECOMMENDATIONS (Continued)

doors when you are on vacation. #10 style windows should have a non-removable ornamental iron grating placed over the outside or bars placed over the inside. #12 style windows are fairly secure. You can have key locks installed in them, however, if you both dead-latches thrown whenever these windows are closed, the same effect will be achieved. The lighting recommendations for your house are as follows. First, a brighter and clear light should be installed over the main entrance to make your house numbers more visible to the street. A double spotlight could also be installed on the S.E. corner of the garage with one bulb then directed over the main garage doors and the other spot to be directed along the East wall of the garage. Another double spotlight should be installed on the N.W. corner of the house with one bulb directed along the West wall and the other bulb directed along the North wall, facing the porch entrance. Also, a single spotlight could then be installed on the South wall of the house, just East of the porch. This would protect the porch from the other side. You have some shrubbery that should be trimmed lower so that it does not block the view of the doors and windows visible to the street. Also, there is one tree in particular that makes your house numbers very hard to see from the street.

END