CHAPTER THREE

CRIME STATISTICS

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CRIME STATISTICS

A. Introduction

This chapter of the Pinellas Trail Community Impact Study examines the relationship between criminal activity and the Pinellas Trail. As discussed elsewhere in this study, there have been objections to proposed trail extensions because of perceived problems with crime and neighborhood privacy. To present an overview of crime rates, crime data for 1993, 1995, and 1999 have been collected for Pinellas County and St. Petersburg. St Petersburg was focused on because crime data is separated by crime tract, which allowed for a greater level of comparative analysis. The sampling techniques used by the Pinellas County Sheriff's Department and the City of St. Petersburg Police Department resulted in significantly different samples. Accordingly, crime data from St. Petersburg is not comparable to the Pinellas County data as detailed later.

In both the county and St. Petersburg samples, the study team found that peaks in crime rates along the trail were generally related to the character of the surrounding area rather than to the existence of the Pinellas Trail. For example, a peak in shoplifting crimes occurred in the St. Petersburg trail tracts near the Tyrone Square Mall as well as other trail tracts traversing retail commercial areas. Upon further examination, the study team found that there were roughly 10 crime tracts throughout the city with higher than average shoplifting crimes (for each of the three reported years one to three of the top 10 shoplifting crime tracts were trail tracts). The general character of the top 10 shoplifting crime tracts was consistently retail or non-residential. When shoplifting crimes were controlled for in the analysis, there was no difference between the growth rates of crime in citywide crime tracts, trail tracts, and non-trail tracts.

The literature review suggests that crime rates may be lower along multiuse trails because they are used frequently and busy areas tend to discourage opportunistic crimes. Generally, the 1993, 1995, and 1999 crime statistics support the finding that the trail has not had an adverse impact on crime. Factors external to the trail seem to be better indicators of crime rates than the

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presence of the trail, as predicted by one survey respondent in the homeowner's association officer survey section of this report.

This chapter summarizes the crime data sampling methodology, countywide crime data, City of St. Petersburg crime data and general conclusions or findings regarding crime rates and the Pinellas Trail. The findings and summary conclusions of the crime statistics are related to the findings from the property value trends assessment, realtor's survey, neighborhood association survey and resident's mail-back questionnaire evaluations.

B. Methodology

Actual reported crimes for the years 1993, 1995, and 1999 were collected for four Pinellas Trail segments. The identified trail segments were the same as those discussed in *Chapter 2: Property Value Trends Assessment* of this report and are specifically defined as:

- St. Petersburg – between 9th Avenue North and Central Avenue;
- Seminole– between 102 Avenue North and Park Boulevard;
- Dunedin – between Michigan and Sunset Point Road; and
- Palm Harbor - Nebraska Avenue to Tarpon Avenue.

The market areas generally extended approximately one quarter of a mile on either side of the Pinellas Trail along each of the four segments. Initially, the countywide and St. Petersburg data were analyzed together but once the crime data were evaluated it was apparent that the sampling methodologies were distinctly different. The Pinellas County collection method allowed the study team to pinpoint the exact location of reported crimes whereas the collection technique for St. Petersburg only placed the crime incident within a large geographic area or "crime tract" (similar to Census Tracts or Traffic Analysis Zones). When countywide Pinellas Trail crime data was compared to St. Petersburg trail-related crime statistics, the countywide trail-related crime sample was somewhat small.

As shown in *Table 3.1: Crime Data Summary*, these sampling differences resulted in a sample of 627 crimes in St. Petersburg for the three years (1993: 211; 1995: 187; and 1999: 227 total crimes). The countywide data set was much smaller with a sample of 43 crimes for the three years (1993: 9; 1995: 15; and 1999: 19). Based upon these geographic differences, the crime data from St. Petersburg is not comparable to the Pinellas County data. Accordingly, the study team analyzed the two groups of data separately as outlined below.

Table 3.1: Crime Data Summary (St. Petersburg and Pinellas County)

Summary of Crime Types Committed - Pinellas Trail

Crime Group	1993[1]	93 St. Pete	1993 Total	1995[1]	95 St. Pete	1995 Total	1999[1]	99 St. Pete	1999 Total	Final Total
Other	4	-	4	3	-	3	4	-	4	11
Murder	0	1	1	0	0	0	0	0	0	1
Forcible Sex Offenses	1	3	4	3	5	8	4	4	8	20
Robbery	0	5	5	3	6	9	1	7	8	22
Aggravated Assault	1	51	52	3	32	35	6	54	60	147
Burglary	2	40	42	2	44	46	3	38	41	129
Larceny	1	94	95	1	85	86	1	110	111	292
Motor Vehicle Theft	0	17	17	0	15	15	0	14	14	46
Totals	9	211	220	15	187	202	19	227	246	668

1. Years include all areas except for St. Petersburg.

The sampling methodology for the City of St. Petersburg data included all incident reports for "Crime Tracts" that the Pinellas Trail abuts or traverses. It should be noted that the study team looked at incidents of crime reported for "trail tracts" (crime tracts abutting or traversed by the Pinellas Trail) and all other city crime tracts. Crime Tracts are geographic boundaries created by the City of St. Petersburg to report and summarize crime statistics (similar to Census Tracts or Traffic Analysis Zones). Accordingly, the study methodology was modified to include a comparison of St. Petersburg citywide crime rates and trail-related crime statistics within the City of St. Petersburg. We found that peaks in crime rates along the trail-abutting crime tracts could generally be explained by the characteristics of the surrounding area.

C. Crime Rates Along The Trail

Although each crime report includes a specific description of the type of offense, for analytical purposes the reports were summarized and tabulated as they would be for national crime reporting efforts. Each of the crime reports was categorized using eight of the possible 13 FDLE crime-reporting categories. The following eight categories were used for this study: (1) murder; (2) forcible sex offenses; (3) robbery; (4) aggravated assault; (5) burglary; (6) larceny; (7) motor vehicle theft; and (8) other. The "other" category included offenses such as (a) possession drug paraphernalia; (b) possession controlled substance; (c) resisting or obstructing a law enforcement officer without violence; (d) shooting or throwing a missile at a dwelling; (e) arson; (f) litter; and (g) violation of a county ordinance. All crime reports were included in one of the eight general crime categories.

The Pinellas Trail crime reports provided by the Pinellas County Sheriff's Department are shown in *Table 3.1: Crime Data Summary*. The number of trail-related crime reports escalated from nine in 1993 to 12 in 1995 and 15 in 1999. This trend is inconsistent with both statewide and countywide crime rates for similar periods. According to the FDLE, Florida's total crimes index declined between 1990 and 2000, both in total violent and property crimes and in the index rate crimes per 100,000 persons. The most recent peak in crime occurred in 1991 and crime rates have declined since then. From 1990 to 2000, index crimes are down 20.2 percent in number and 34.4 percent in rate (FDLE, Florida Statistical Analysis Center, 2001). The FDLE also reported that the Pinellas County Total Crime Index declined between 1993 and 1999, as depicted in *Table 3.2: Total Index Crime for Pinellas County*. In Pinellas County, all types of crime decreased between 1993 and 1999 with the notable exception of murder and motor vehicle theft. The extremely small sample size could account for the discrepancy between the sampled segments of the Pinellas Trail and countywide and statewide crime trends. For example, it is possible that a random sample of all crimes that have occurred on the Pinellas Trail between 1990 and 2000 would reflect the countywide and statewide trends. The discrepancy could then be attributed to the geographic limits of the three sampled segments rather than an actual trend in general criminal activities.

Table 3.2: Total Index Crime for Pinellas County Florida (1993 -1999)				
Year	1993	1995	1999	Change 1993-99
Pinellas Co. Population	864,953	876,200	898,784	
% Change	-	1.3%	2.6%	3.9%
Murder	39	52	42	
% Change	-	33.3%	-19.2%	7.7%
Forcible Sex Offenses	1,027	811	880	
% Change	-	-21.0%	8.5%	-14.3%
Robbery	2,259	2,183	1,759	
% Change	-	-3.4%	-19.4%	-22.1%
Aggravated Assault	6,165	6,195	4,932	
% Change	-	0.5%	-20.4%	-20.0%
Burglary	12,046	10,879	10,191	
% Change	-	-9.7%	-6.3%	-15.4%
Larceny	33,615	33,919	30,365	
% Change	-	0.9%	-10.5%	-9.7%
Motor Vehicle Theft	2,719	2,936	3,898	
% Change	-	8.0%	32.8%	43.4%
Total Index Crime	57,870	56,975	56,479	
% Index change	-8.17	-5.80	-7.8	-2.4%
Index Rate per 100,000 persons	6,690.5	6,502.5	6,330.5	
Rate Change	-8.61	-6.39	-8.5	-5.4%

SOURCE: Florida Department of Law Enforcement. Crime in Florida, Florida Uniform Crime Report. Tallahassee, FL:
          FDLE. Florida Statistical Analysis Center, 2001.

As summarized in *Table 3.1*, there were no instances of murder and motor vehicle theft on the three identified trail segments in 1993, 1995, or 1999 (excluding St. Petersburg data) whereas these crimes escalated countywide and declined somewhat in St. Petersburg trail tracts. The most notable increases in trail-related crimes occurred in the aggravated assault and forcible sex offenses categories; however, burglaries and robberies also appeared to increase over the study period rather than decline as noted in the statewide and countywide crime statistics. This initial finding appears to support citizen concerns that were the impetus for this study. Accordingly, the crime data were examined in terms of time of day and location. The peak crime activity period appears to be from 3:00 p.m. until 11:00 p.m. During this time of day, criminal activity peaked in 1995 and declined somewhat in 1999.

Table 3.3: Pinellas Trail Crime Data Summary
Summary of Crime Types Committed - Pinellas Trail

Crime Group #	1993	1995	1999	Final Total	Change 93-99
Aggravated Assault	1	3	6	10	500%
Forcible Sex Offenses	1	3	4	8	300%
Other	4	3	4	11	-
Burglary	2	2	3	7	50%
Larceny	1	1	1	3	-
Robbery	0	3	1	4	100%
Motor Vehicle Theft	0	0	0	0	-
Murder	0	0	0	0	-
Totals	9	15	19	43	111%

Note: Table includes countywide crime data, except for St. Petersburg.

Table 3.4: Time Crimes Committed - Pinellas Trail

Time Crimes Committed	1993	1995	1999	Totals
07:00 - 15:00	3	2	5	10
15:00 - 23:00	4	11	8	23
23:00 - 07:00	2	2	6	10

1. No specific times were available from St. Pete.

Crime rates have increased at different rates along different sections of the trail (*Tables 3.5, 3.6 and 3.7*). For example, trail-related crime rates increased in section #2 from three total crimes (one crime per four months) in 1993 to six total crimes in 1995 and 1999 (one crime per two months). This trend line indicates a leveling off over the study period whereas there is a steady increase in crime in section #3. As depicted in *Exhibit 3.3*, total crimes increase from two to nine over the study period in this segment. Along section #4, total reported crimes decreased from four in 1993 to two in 1995 and then increased again to four in 1999.

Most notable from these statistics is that crime is not very prevalent along the Pinellas Trail. The first segment of the Pinellas Trail opened on December 1, 1990. The initial five-mile segment connected Taylor Park in Largo to Seminole City Park in Seminole. The Pinellas Trail is now 34 miles long and connects Tarpon Springs to St. Petersburg. Pinellas County Planning now estimates that more than 90,000 persons use the Pinellas Trail each month (*Pinellas Trail Guide*, World Wide Web, 2001). In 1999, there were roughly 1.6 crimes per month along the selected segments. This is quite a small number when the total population served by the Pinellas Trail is taken into consideration. In part higher use, may explain why crime rates continued to increase along the Pinellas Trail while countywide and statewide crimes rates steadily decreased.

Table 3.5					
Trail Crime Statistics - County Section #2: 102nd to Park					
Crime Category	Group #	1993	1995	1999	Totals
Other	0*	1	1	1	3
Murder	1	0	0	0	0
Forcible sex offenses	2	0	1	1	2
Robbery	3	0	1	0	1
Aggravated Assault	4	0	2	2	4
Burglary	5	1	1	1	3
Larceny	6	1	0	1	2
Motor Vehicle Theft	7	0	0	0	0
Total crimes		3	6	6	15

Table 3.6					
Trail Crime Statistics - County Section #3: Michigan to Sunset					
Crime Category	Group #	1993	1995	1999	Totals
Other	0*	2	2	2	6
Murder	1	0	0	0	0
Forcible sex offenses	2	0	1	1	2
Robbery	3	0	2	1	3
Aggravated Assault	4	0	1	3	4
Burglary	5	0	0	2	2
Larceny	6	0	1	0	1
Motor Vehicle Theft	7	0	0	0	0
Total crimes		2	7	9	18

Table 3.7					
Trail Crime Statistics - County Section #4: Nebraska to Tarpon					
Crime Category	Group #	1993	1995	1999	Totals
Other	0*	1	0	1	2
Murder	1	0	0	0	0
Forcible sex offenses	2	1	1	2	4
Robbery	3	0	0	0	0
Aggravated Assault	4	1	0	1	2
Burglary	5	1	1	0	2
Larceny	6	0	0	0	0
Motor Vehicle Theft	7	0	0	0	0
Total crimes		4	2	4	10

Although this sample is relatively small, it is indicative that there are few crimes per user and the neighborhood that the trail traverses may impact crime rates.

Tables 3.5 through 3.7 are three tables depicting the total number and type of crime for the years 1993, 1995, and 1999 by trail section. For the three measured years, there were four aggravated assaults reported for the trail segments from 102nd to Park and Michigan to Sunset whereas there were only two assaults reported for the Nebraska to Tarpon section for the same period. The segment from Nebraska Avenue to Tarpon had the fewest total number of incidents reported over the three study years whereas Section 4 had slightly more than Section 2. Forcible sex offenses appear to be more likely to occur along Section 3 than along Section 2 or 4. The reported crimes have been color coded and illustrated in Exhibits 3.2, 3.3 and 3.4 below. The

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maps clearly pinpoint the exact location of the reported crimes. For example, it is clear that three of the 1993 reported crimes occurred about one-half mile east and west of the Pinellas Trail adjacent to Section #2.

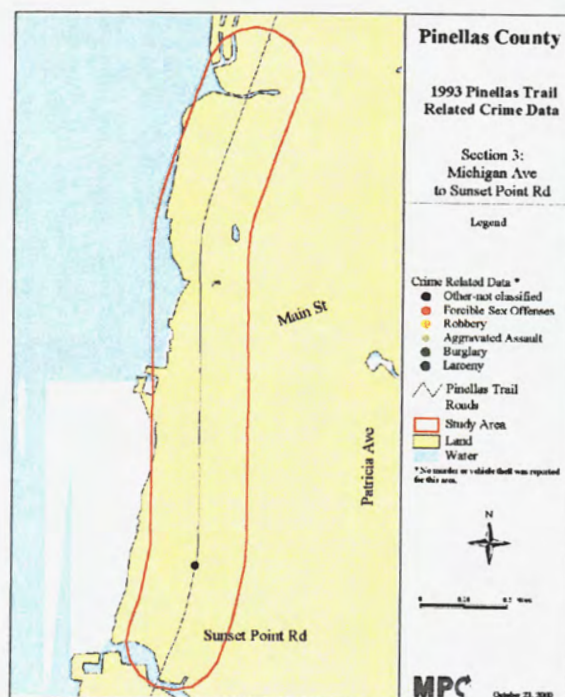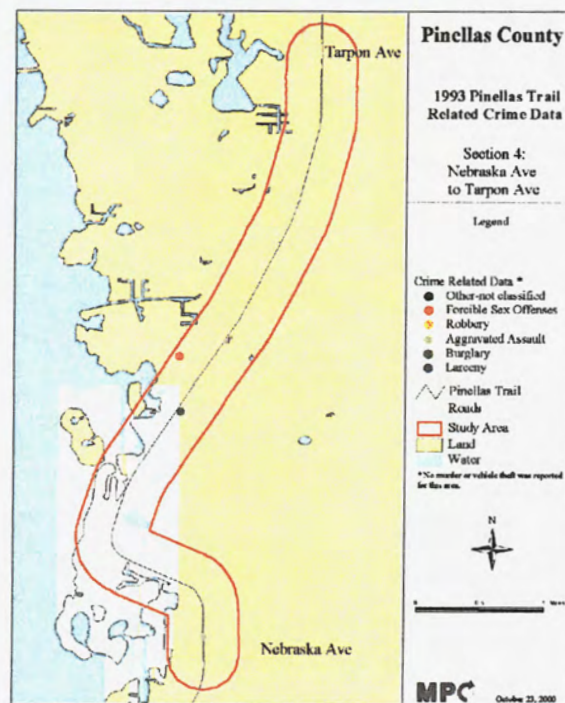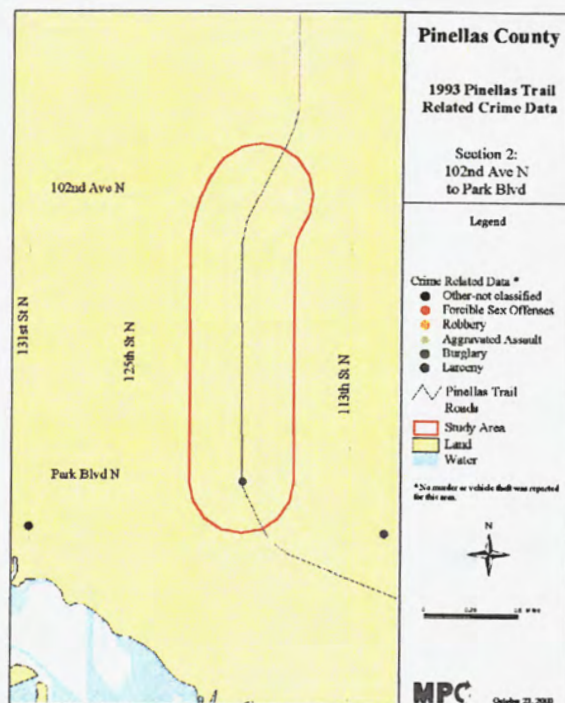## Exhibit 3.2: Pinellas Trail Related Crimes (1993)

Pinellas County

1993 Pinellas Trail
Related Crime Data

Section 2:
102nd Ave N
to Park Blvd

Legend

Crime Related Data *
- Other-not classified
- Forcible Sex Offenses
- Robbery
- Aggravated Assault
- Burglary
- Larceny

Pinellas Trail
Roads
Study Area
Land
Water

* No murder or vehicle theft was reported for this area.

Pinellas County

1993 Pinellas Trail
Related Crime Data

Section 3:
Michigan Ave
to Sunset Point Rd

Legend

Crime Related Data *
- Other-not classified
- Forcible Sex Offenses
- Robbery
- Aggravated Assault
- Burglary
- Larceny

Pinellas Trail
Roads
Study Area
Land
Water

* No murder or vehicle theft was reported for this area.

Pinellas County

1993 Pinellas Trail
Related Crime Data

Section 4:
Nebraska Ave
to Tarpon Ave

Legend

Crime Related Data *
- Other-not classified
- Forcible Sex Offenses
- Robbery
- Aggravated Assault
- Burglary
- Larceny

Pinellas Trail
Roads
Study Area
Land
Water

* No murder or vehicle theft was reported for this area.

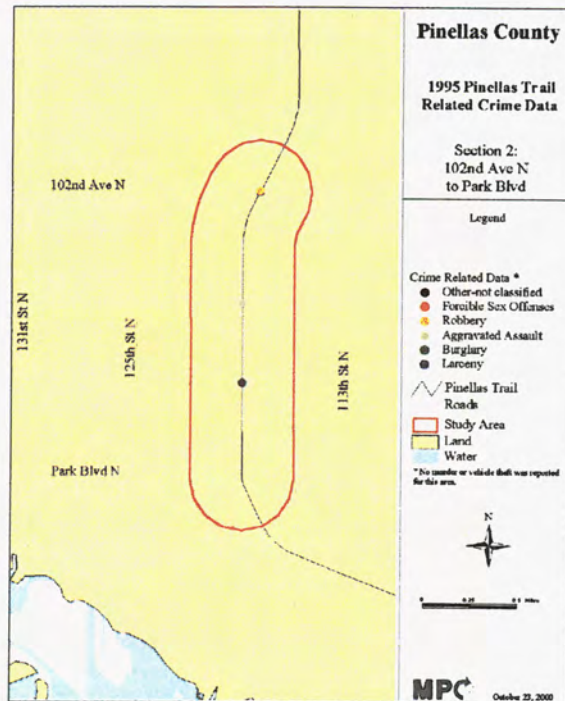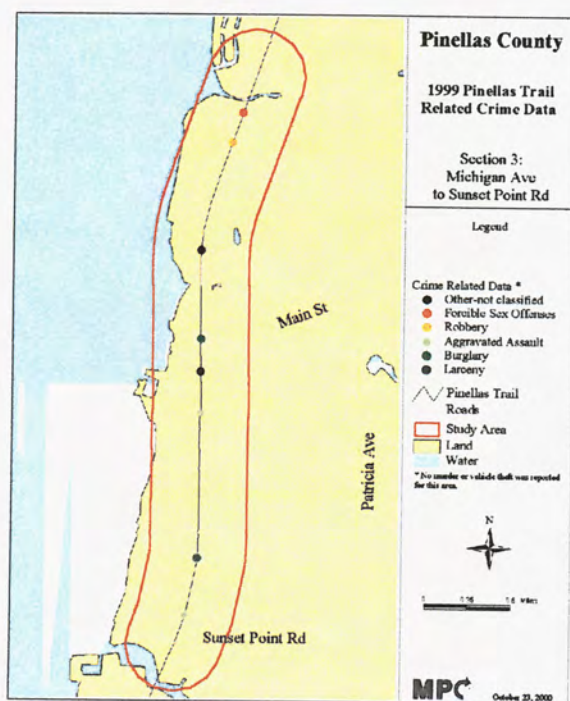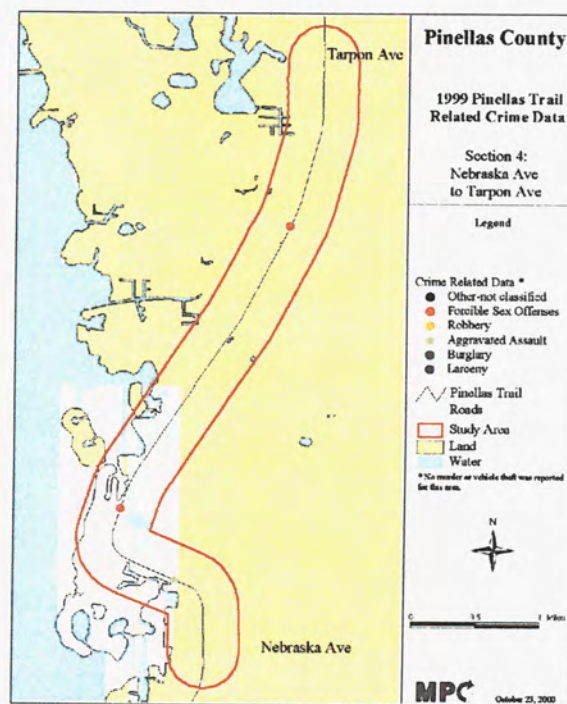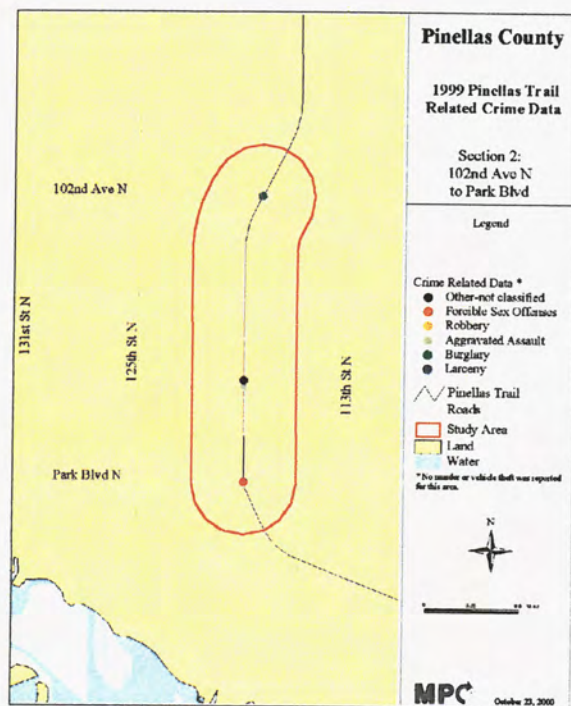## Exhibit 3.3: Pinellas Trail Related Crimes (1995)
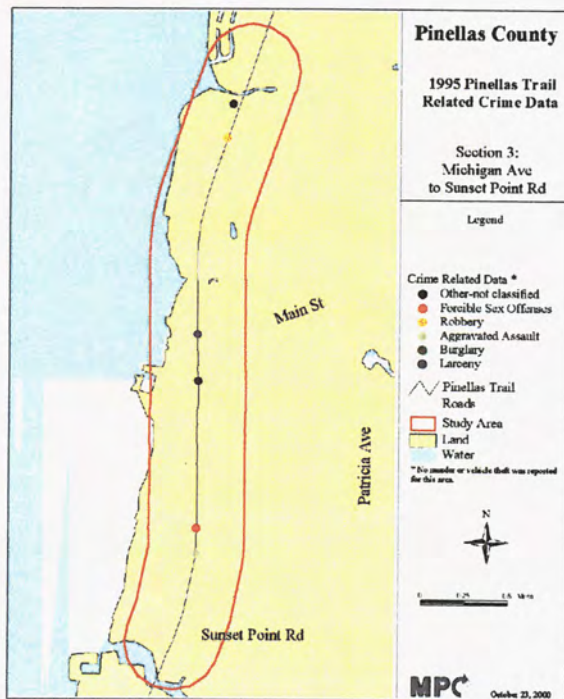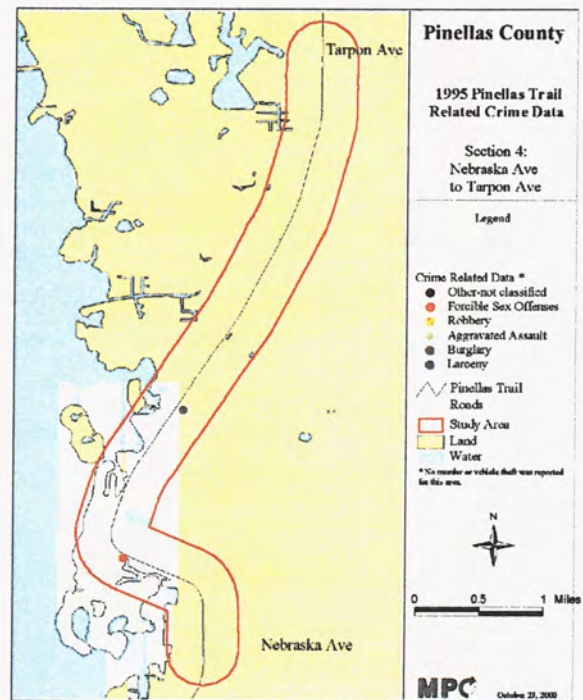
Exhibit 3.4: Pinellas Trail Related Crimes (1999)

D. St. Petersburg Crime Statistics

The following is an assessment of the City of St. Petersburg Police Department Crime Tract dataset. As noted earlier, the sampling methodologies differed in their geographic level of specificity; therefore the Pinellas County and St. Petersburg crime data sets are not comparable. The City of St Petersburg crime tracts sampling methodology yielded a larger sample, thus the study team determined that it would be appropriate to evaluate the St. Petersburg crime data in relation to citywide crime statistics. Data for the years 1993 and 1995 was only available in hard copy format. The 1999 data was provided in a digital format. The study team entered and coded the data in a manner consistent with the crime data provided by the Pinellas County Sheriff's Department crime data analyzed elsewhere in this chapter. The St. Petersburg crime data was evaluated to determine whether crime tracts that contain or abut the Pinellas Trail (known as "trail tracts") were unsafe or attracted crime compared to those crime tracts that do not contain or abut the Pinellas Trail.

Data Limitations

There are some dataset limitations that should be noted at the outset of this analysis. The crime data are constrained by the fact that crime figures by crime tract simply represent the total number of crimes in the tract. In other words, it cannot be determined whether the crime occurred along the Pinellas Trail, near the Pinellas Trail or even as far as a mile from the Pinellas Trail. The available City of St. Petersburg crime data do not allow an examination of the amount of crime within a certain geographic buffer. Were better location data available, it would be desirable to select crime reports that would exclude the crimes that occurred far enough away to not be attributed to the trail.

St. Petersburg Police Department staff stated that some crime tract boundaries were slightly modified after calendar year 1995. The analysis of selected crime tracts across years would not be exactly comparable because of these boundary changes. Accordingly, the study team has not made any such comparisons. The geographic boundaries are, however, similar.

The study team has computed averages and standard deviations that describe the crime statistics provided by the City of St. Petersburg Police Department. These averages are based upon the total number of crimes divided by the number of crime tracts (472). The 1993 and 1999 averages are based upon the total number of crimes divided by the number of crime tracts that reported crimes within the calendar year, which for both years was fewer than the 472 total tracts. Thus, the computed averages are not exactly comparable and caution should be used in interpreting the data and making judgments regarding the levels of crime from one year to another.

Exhibits 3.5 through 3.8 reflect the initial sample of crime data provided by the City of St. Petersburg at the time that the countywide data was collected. It should be noted that this data set stopped at Central Avenue and did not include crime data for all St. Petersburg crime tracts that either abutted the trail or were traversed by the trail (there was no data for trail tracts southeast of Central and the Pinellas Trail). The data is only included here for comparison purposes. These figures illustrate the need for the second sampling effort and the disparity between the crime statistics for Section #1 in comparison to the other three county sections.

Table 3.8					
Pinellas Trail Crime Statistics - City Section #1: St. Petersburg					
Crime Category	Group #	1993	1995	1999	Totals
Other	0*	-	-	-	0
Murder	1	1	0	0	1
Forcible sex offenses	2	3	5	4	12
Robbery	3	5	6	7	18
Aggravated Assault	4	51	32	54	137
Burglary	5	40	44	38	122
Larceny	6	94	85	110	289
Motor Vehicle Theft	7	17	15	14	46
Total crimes		211	187	227	625
1. Due to the large numbers of crimes, all totals were summed from master lists.					
*. No specific addresses or dates and times, were available for this area.					

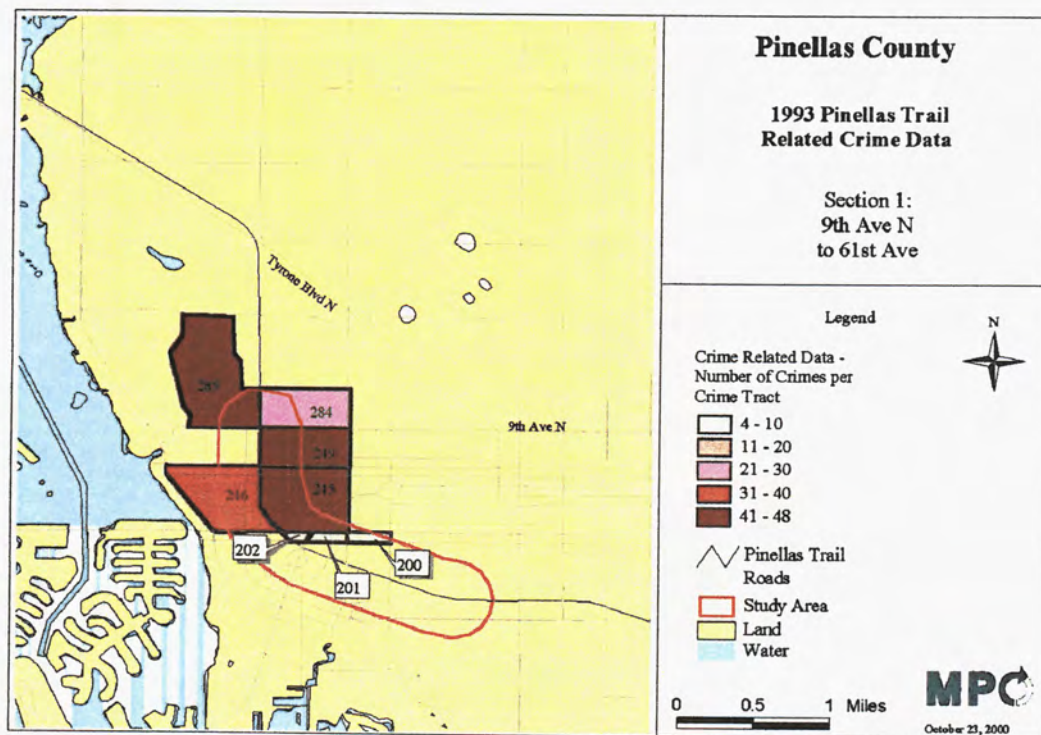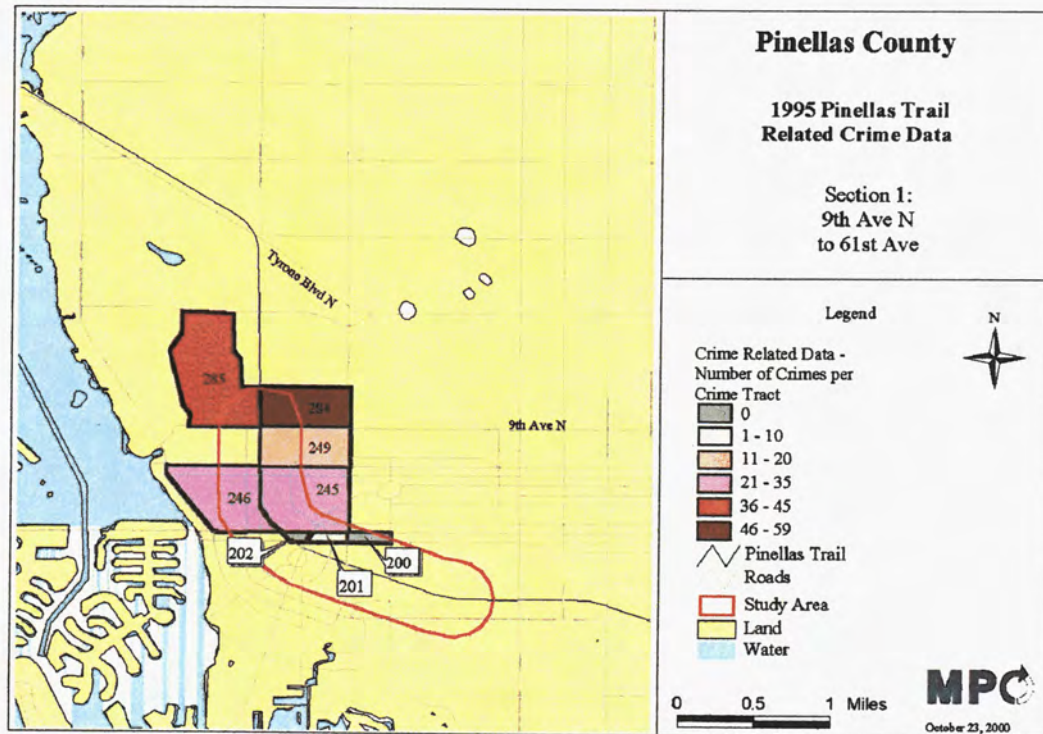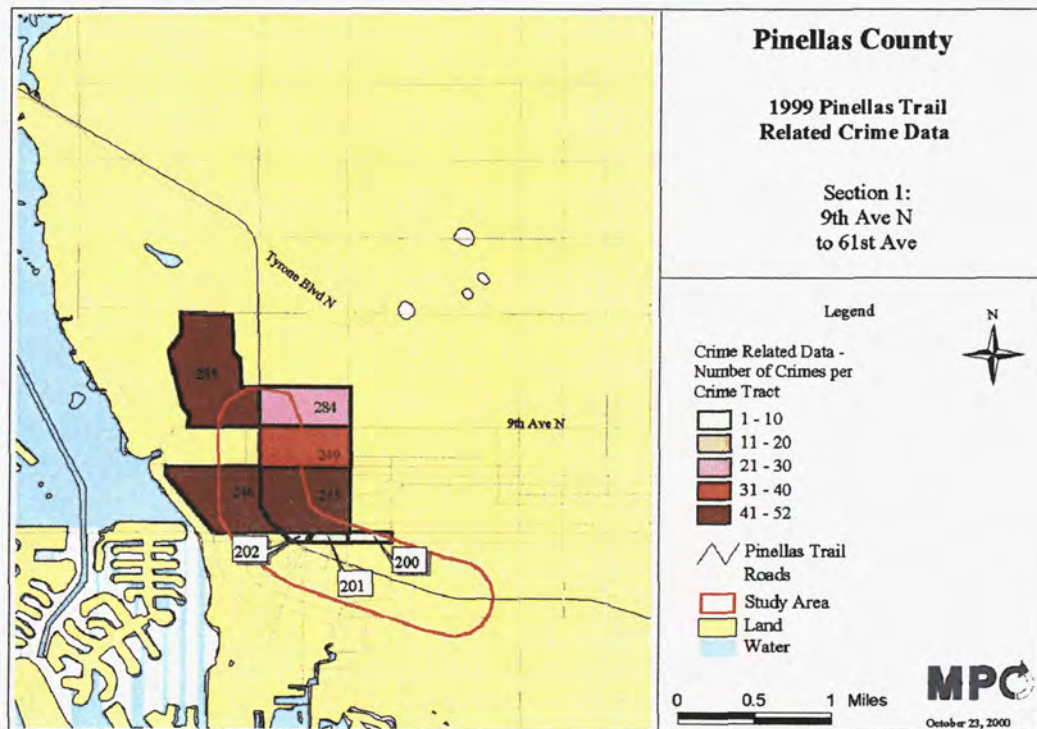**Exhibit 3.5: 1993 and 1995 Trail Crime Data for St. Petersburg**

Pinellas County

1995 Pinellas Trail
Related Crime Data

Section 1:
9th Ave N
to 61st Ave

Legend   N

Crime Related Data -
Number of Crimes per
Crime Tract
☐ 0
☐ 1 - 10
☐ 11 - 20
☐ 21 - 35
☐ 36 - 45
☐ 46 - 59
∧ Pinellas Trail
  Roads
☐ Study Area
☐ Land
☐ Water

0   0.5   1 Miles

MPC

October 23, 2000

Pinellas County

1993 Pinellas Trail
Related Crime Data

Section 1:
9th Ave N
to 61st Ave

Legend   N

Crime Related Data -
Number of Crimes per
Crime Tract
☐ 4 - 10
☐ 11 - 20
☐ 21 - 30
☐ 31 - 40
☐ 41 - 48
∧ Pinellas Trail
  Roads
☐ Study Area
☐ Land
☐ Water

0   0.5   1 Miles

MPC

October 23, 2000

Exhibit 3.6: 1999 Trail Crime Data for St. Petersburg

St. Petersburg Full Dataset Statistics

After the second sample was collected and tabulated, the study team was able to determine that crime in the City of St. Petersburg, as a whole, increased from 1993 to 1995 and decreased from 1995 to 1999, while crime in trail tracts increased from 1993 to 1995 and continued to increase from 1995 to 1999. The study team evaluated the data and determined that the city did not use an identical total number of crime tracts across the three years studied. Due to the variation in the number of total tracts, total crime in St. Petersburg decreased from 1995 to 1999 while the average crime per tract figure increased. This St. Petersburg crime dataset shows a different trend from the steady decline in statewide and countywide crime rate between 1993 and 1999.

The study team examined the number of crime reports per geographic area (crime tract). For each crime tract, the average number of reported crimes was computed to provide a basis for

comparison between trail tracts and citywide crime tracts. The average amount of crime per trail tract within the city of St. Petersburg has increased over the three measured years. The average number of crimes per trail tract was 43.45 in 1993, 54.16 in 1995, and 58.97 in 1999. So, the average number of crimes in trail tracts increased by about 12 percent per year from 1993 to 1995 and slightly more than two percent per year from 1995 to 1999.

In 1993, the amount of citywide violent crimes totaled 4,073, with 121 of those occurring within trail tracts (3 percent). In 1995, the amount of citywide violent crimes totaled 4,721 with 166 of those occurring within trail tracts (3.5 percent). In 1999, the amount of citywide violent crimes totaled 4,010, with 127 of those occurring within trail tracts (3.2 percent). For the three measured years, shoplifting led in each of those years in occurrences per trail tract. Burglary, simple assault, larceny (from vehicle) and larceny (other) rounded out the top five in each of those years, although in different ranking order. None of the crimes in the yearly top five are violent crimes. For this assessment, violent crimes were considered to be murder, manslaughter, rape, sodomy, child molestation, robbery and aggravated assault.

A t-test was used to determine whether the average crime rate in tracts along the trail are statistically different than the overall average crime rate in St. Petersburg. A t-test measures the truthfulness of a hypothesis in order to draw conclusions about data relationships. The t-test formula is:

$$T = (x - u) / (s / square\ root\ of\ n)$$

Where:
X = *mean of tracts along the Pinellas Trail*
U = *overall mean of all tracts in St. Petersburg*
S = *standard deviation of tracts along the Pinellas Trail*
N = *number of tracts along the Pinellas Trail*

Some area residents hypothesize that crime along the Pinellas Trail is higher than elsewhere in the city. The test of this hypothesis would be: "The average crime rate for tracts along the trail for 1999 (58.97) is no different than the average crime rate for all tracts (58.53)."

A rejection of this hypothesis supports the case that the average crime rate along the Pinellas Trail is higher. Conversely, acceptance of the hypothesis indicates that, to a high degree of confidence, differences in crime rates are due to sampling errors or other data deficiencies, not to higher crime rates along the Pinellas Trail. A 90 percent level of confidence is used for the evaluation.

For a sample size of 31 (the number of crime tracts along the Pinellas Trail) the critical value of t at 90 percent is 1.282. This means if the calculated t value, which measures the difference in the trail average and overall average, is greater than 1.282, then there is a 90 chance that the crime rate along the trail is higher due to factors other than sampling errors. The t statistic for 1993 is –0.536, –0.135 for 1995, and 0.0196 for 1999.

Because the t statistic for all three years is less than the critical value of t (1.282), this means that the null hypothesis is accepted. As discussed above, acceptance of the null hypothesis indicates that the difference between the average crime rate of the Pinellas Trail tracts and the overall crime rate cannot be explained by anything other than sampling errors. Accordingly, it is concluded that crime rates along Pinellas Trail tracts is not higher than the overall crime rate.

Crime tract 346 is located on the south side of Tyrone Boulevard. This particular tract has led all tracts in shoplifting reports for the measured years (351 in 1993, 478 in 1995 and 473 in 1999). While this may be an alarming statistic, one must realize that shoplifting is more of a retail-oriented crime of opportunity than the typical type of crime attributable to a trail. After further analysis, the study team found that a key characteristic that may be driving this statistic could be that the Tyrone Square and Crosswinds Malls located within this tract. In addition, there are several other commercial developments in close proximity, thus providing the opportunity for these types of crimes to occur.

Crime tract 401 along the trail is also heavily commercial, and thus, the same rationale could be assumed to explain its high number of shoplifting crimes. If all other crimes were

Exhibit 3.7: St. Petersburg Crime Tract Averages (all crimes)
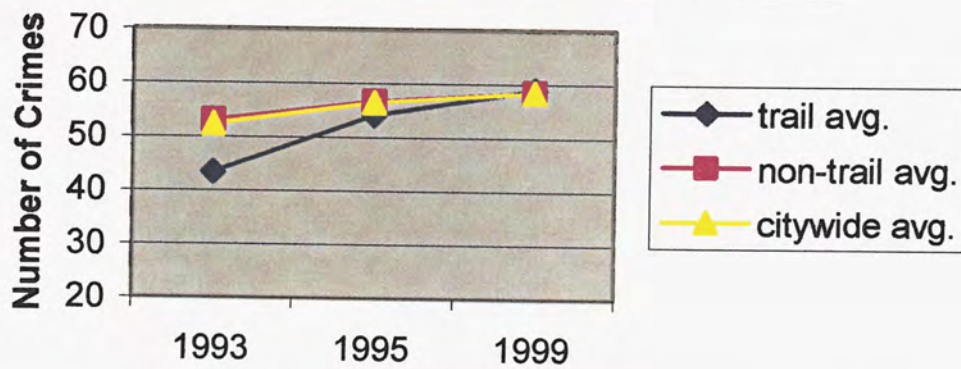
Exhibit 3.8: St. Petersburg Crime Tract Averages (excludes shoplifting)
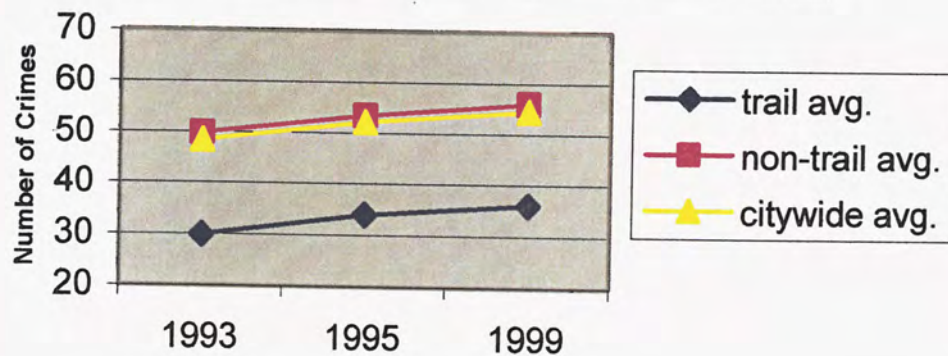
considered in the absence of shoplifting crime reports, the total trail tract crimes would decrease by 39 percent as illustrated in *Exhibits 3.7 and 3.8*.