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Executive Summary

Linking Safety Measures, Their Visibility, and Perceived Safety in the *Tren Urbano* System

by

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Executive Summary

Introduction

This research examines the relationship between different misconduct in rail systems and transit security. This relationship is investigated by examining the National Survey of Urban Rail Transit Systems conducted by the Civil Infrastructure Research Center in 1997. This research also presents the security practices, and design and technology strategies used in Plaza Las Américas shopping center. Two key areas related with safety and security measures in Plaza Las Américas are discussed: Technology and Labor Practices, and Physical Design Characteristics. These two areas provide insight into complexity of transit security and form the basis of recommended approaches to transit agencies interested in improving security.

To gain an understanding of the actual crime and the relationships between more serious crime and the quality of life crime¹ occurring in the San Juan Metropolitan Area, this research examines data provided by Hato Rey's Police Headquarter. Crime statistics in Plaza Las Américas are discussed as well. Lastly, this research provides preliminary conclusions and up to date transit security recommendations for the *Tren Urbano* system in San Juan, Puerto Rico.

Results and Discussion

2.1 Findings

2.1.1 Perception and Disorder

Maintaining order and deterring quality of life crimes are essential in changing people's perception of whether an area is safe or not. Transit systems thus need to place emphasis on transit security, protecting people and property from other people on the transit systems. In a transit system, the perception of danger is as important as the real rate of crime. If passengers perceive that the system is unsafe, they will be reluctant to use it and will choose to travel by other modes. The National Survey of Urban Rail Transit Systems demonstrates the importance that security (or perceived security) plays in ridership patterns and transit use.

- Fear of personal safety in the system was at the third position of a list of 6 variables that influence the use of transit in the United States
- The most frequent misconduct in rail systems influencing travel behaviors were: smoking/drinking/drug abuse, threats, noisy people, graffiti, vandalism, fights, robbery, and murder

¹ Quality of life offenses are defined as those crimes that disturb citizens and increase their sense of discomfort and fear even though they do not physically threaten citizens. My definition of these offenses include the following – unlawful appropriation, stolen vehicles, and burglary.

- Perceived crime risk ranked the highest at parking areas followed by the platform area
- Measures of crime control ranked in the following descending order: uniformed officers, undercover plainclothes police officers, hardware such as cameras and surveillance equipment, private security, and citizen patrol/neighborhood watches

2.1.2 Crime Statistics in the San Juan Metropolitan Area (SJMA)

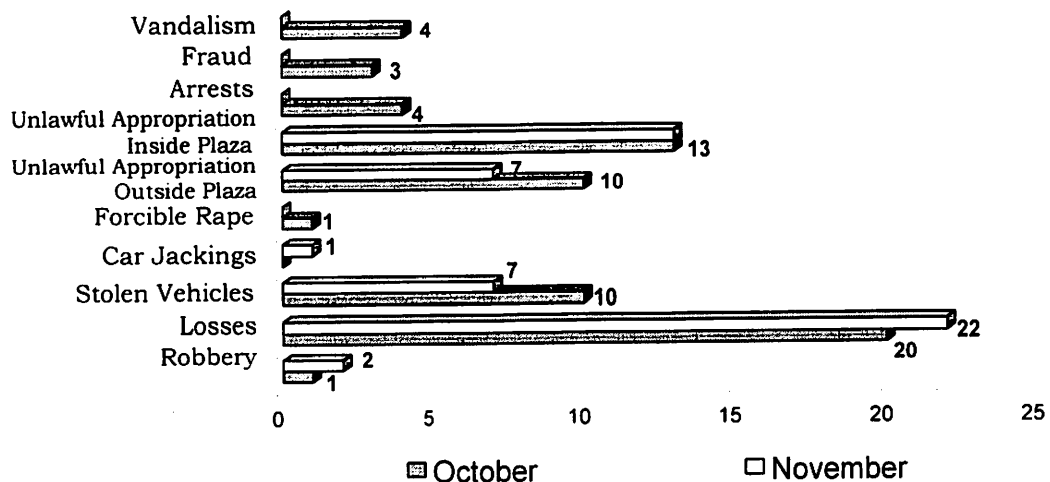
Building a transit system in Puerto Rico raises many security concerns for potential transit travelers as the SJMA faces problems in crime and security. There can be no question that the fear of assault is one of the primary motivating factors influencing decisions as to urban form, transportation choice, and even choice of activities within the SJMA. In addition, the high rate of drug trafficking and the resulting homicides attracts wide spread attention on radio talks show and in newspapers every day. As a result, crime and crime prevention in the SJMA are serious issues that receive serious political attention. The following table shows the most common crimes in the SJMA during the past two years (excluded November and December):

	Murder		Sexual Assault		Robbery		Aggravated Assault		Burglary		Unlawful Appropriatio		Stolen Vehicles		Total	
	1998	1999	1998	1999	1998	1999	1998	1999	1998	1999	1998	1999	1998	1999	1998	1999
Viejo San Juan	7	8	2	2	52	49	36	27	53	101	390	396	209	171	749	754
Parada 19	12	6	3	2	234	127	56	48	244	178	907	536	468	337	1924	1234
Calle Loiza	11	12	3	3	306	171	58	41	190	193	718	494	287	254	1573	1168
Barrio Obrero	23	14	6	5	236	192	117	77	285	319	427	475	126	166	1220	1248
Rio Piedras	19	20	8	10	581	376	84	95	415	425	827	859	597	654	2531	2439
Cupey	6	8	3	1	228	228	24	38	415	377	438	360	206	208	1320	1220
Monte Hatillo	19	10	1	0	155	86	49	29	178	191	264	151	119	127	785	594
Caimito	9	9	1	2	132	131	35	23	253	222	240	167	207	213	877	767
Hato Rey Este	43	23	6	2	347	209	120	73	368	319	1029	774	305	325	2218	1725
Puerto Nuevo	14	21	8	4	454	415	78	60	429	311	834	696	720	606	2537	2113
Hato Rey Oeste	2	3	2	2	233	163	27	16	174	155	1026	869	685	612	2149	1820
Total	165	134	43	33	2958	2147	684	527	3004	2791	7100	5777	3929	3673	17883	15082

These concerns demonstrate that security and security planning must play an important role in the design and construction of *Tren Urbano*.

2.1.3 Crime Statistics in Plaza Las Américas (October-November 1999)

The following graph identifies the different types of crime occurring in Plaza Las Américas during the past two months:



Excluding losses, the most common crime is the unlawful appropriation. This type of crime is more frequent on Fridays and Saturdays and less frequent from Tuesdays to Thursdays. The majority of these cases were reported from 2 to 10 P.M. However, in Plaza Las Américas greater attention is paid to crimes such as robbery and stolen vehicles inside the premises. Last year, three to four vehicles were stolen every day. This statistical figure was reduced during the current year to one vehicle every three days.

2.1.4 Technology and Labor Practices in Plaza Las Américas

A police force patrols Plaza Las Américas using a wide variety of policing tactics such as: random foot patrol, fixed posts, and mobile patrol. These uniformed officers contribute to the security of Plaza by monitoring the activity inside and outside the shopping center. While they do collect and analyze crime data, Chief Rodríguez Viera reports that there is not enough crime to determine statistical trends. However, the police force analyses the time of day in which crimes occur and number of crimes which occur on the area.

Plaza also utilizes technology and equipment to create a secure environment. Ranger American personnel at a control center monitor the closed circuit televisions and notify police when they observe a disturbance on the monitor.

2.1.5 Physical Design Characteristics in Plaza Las Américas

Plaza's design with high ceilings creates a wide open space which makes visitors feel more secure and also allows visitors and security personnel to observe activity occurring throughout the area. In addition, escalators and stairs were created instead of passageways to provide long lines of sight. Plaza's design also includes the following characteristics: no public bathrooms at parking areas, visible emergency facilities, elimination of isolated areas, and adequate lighting.

2.1.6 Uniformed Patrolling Strategies in Plaza Las Américas

Ranger American private security interacts with the police force. Their security plan is coordinated so they can share the same responsibilities such as keeping order and being highly visible to visitors. They track crime trends over each two month time period. Incident reports have shown that increasing crime trends occur during Christmas season. As a result, a special project called *Christmas Preventive Patrolling* was created to patrol the area surrounding Plaza Las Américas and to protect the visitors from would-be offenders.

2.1.7 Preventive Surveillance Service in Plaza Las Américas

The following table summarizes Plaza's security strategies used to control crime:

Crimes against Visitors	Measures of Crime Control
Stolen vehicles Unlawful appropriation	Police officers walking around parking areas
Robbery	Police officers in motorcycle, bicycle and GEM cars
Visitors' fear of crime	Police patrol

Preliminary Conclusions

3.1 Types of Policing

Security personnel may perform different types of policing activities, from undercover policing to uniformed patrol. To prevent quality of life offenses, it is important that security personnel concentrate on order maintenance by making sure that the station is orderly, that legislative mandates that define and prohibit certain offenses on transit systems are obeyed, and that crimes like fare evasion do not occur. Transit agencies should emphasize community policing in which security personnel are assigned to patrol on foot certain stations and gain knowledge of a certain area and individuals. Security personnel should be in uniform as a visible presence to deter crime. The security personnel monitoring the station area should have the power to fine and detain individuals who violate the law.

3.2 Suggestions for an Effective Security Strategy for the *Tren Urbano* System

- Utilize private security guards who are trained carefully to maintain order. These private security guards should be uniformed, patrol the station areas on foot, become familiar with transit passengers and residents of the neighborhood, and have the ability to detain individuals until police arrive and to fine and ticket individuals who commit quality of life offenses.
- These private security guards should work in close partnership with the local police, the station agent, community groups, and maintenance personnel to create a secure transit environment.
- Utilize station agents to manage the station area by monitoring the closed circuit televisions, providing information to patrons, and ensuring maintenance of the system.

Future Work

- Study safety and security measures used in Plaza Carolina
- Document and understand the current process and ideas of security in the *Tren Urbano* system
- Look for lessons which I can apply to the *Tren Urbano* system