



**Greater Austin Crime Commission
Police Force Strength Analysis and Assessment
Dr. Michael L. Lauderdale and Dr. Michelle Burman
August 2015**

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Executive Summary

The greatest responsibility in America in detecting and dealing with crime lies with the local police. The defining and coding into law of criminal statutes are basic and constitutional responsibilities of each state, and decisions about crime governed by state laws are then made by local groups: the police, the grand jury, the elected public prosecutor, the citizen jury and the judge. One of America's fundamental differences is the power provided to the individual and to the local government rather than the central state. This unique difference functions best when the police understand and use a particular model of policing known as *community policing*.

Community policing is based on these fundamental American principles of local control with individual responsibility, and it requires the police to have time and training to develop rapport, mutual respect and support with members of the community. Officers engage by walking a beat and talking with people on the streets, in parks and other public places, and at a variety of community events such as church, school, meetings of neighborhood associations, and other social gatherings. Maintaining public order and solving crimes become a partnership between the community and the police.

In our city, a unique collection of factors must be considered when addressing public safety needs and resources. Austin is the site of the state capital and the greatest number of state employees in Texas. It is the home of tens of thousands of college students and one of the largest universities in the U.S., and it has one of the highest educated populations in the nation. Technology and entertainment are major economic pillars. With important air, highway and rail connections, as well as electronic communications, Austin is becoming a major gateway linking the United States, Mexico and Central America. Austin is one of the most rapidly growing large cities in the nation, and its current population and the projected numbers raise critical questions about resources. There also are increasing numbers of undocumented persons from Mexico living in and near Austin, which is only 234 miles from Nuevo Laredo. Interstate 35 through Austin and Central Texas is thought to be North America's largest venue of illegal guns and drugs, human trafficking, and "dirty" money headed both north and south. Thousands of immigrants, including not only women and unaccompanied children, but also gang members, arrive at our southern border each year from Mexico, Guatemala, Honduras and El Salvador. There is little doubt this affects the level and characteristics of crime in Austin.

Although municipal police departments are divided into as many as seven divisions—patrol, traffic enforcement, investigations, internal affairs, juvenile services, recruitment and training, and administrative—the most common role of the police is that of an officer in uniform and on patrol. There are a variety of measurements used to determine how many officers are needed, including the common standard historically used by Austin and many other cities of a simple ratio of number of officers-per-thousand citizens. For many years Austin has sought to maintain a ratio of two officers-per-thousand citizens. (In 2013 the U.S. Department of Justice reported Austin had 1.95 officers-per-thousand residents, and the current ratio, according to data from APD, is 2.05.) Despite its popularity and ease of

comparison across cities, departments and jurisdictions of all sizes, this ratio is a limited descriptive statistic that cannot capture the subtleties of an officer's workload. Uniformed patrol officers – not plainclothes detectives – are most often the ones rushing from call to call as first responders, yet all sworn personnel in the department are included in the calculation of the ratio. The International Association of Chiefs of Police deemed the per-capita metric “totally inappropriate” and does not recommend it as the sole basis for determining patrol staffing and officer deployment. The ratio does not illustrate how officers actually spend their time nor does it offer any guidance on how to deploy officers.

So what will it take for our community to achieve its public safety goals? **A superior measurement of patrol productivity and proactive policing is the amount of uncommitted or community engagement time that characterizes those officers assigned to patrol. This is the time that the officer has when not responding to calls-for-service.** The activities conducted during an officer's uncommitted time fall into three general categories: (1) official (such as attending roll-call or briefings at the start of the daily watch); (2) administrative (such as maintaining and servicing the police cruiser, writing reports, transporting prisoners, and appearing in court); and (3) personal (such as eating meals, taking breaks, and running personal errands). Uncommitted time permits patrol officers to respond quickly to calls-for-service, provide backup for other officers, and to see and be seen. It is the time that the officer has to stop and talk, attend community meetings, and walk or drive a beat – the activities that characterize *community policing*. Community engagement time should be used to compare the department annually or more often to identify upward or downward trends and to take action to increase uncommitted time when necessary.

The International City/County Management Association proposes 40 percent of a patrol officer's time as a goal for community engagement time. Studies of best practices for other cities show goals ranging from 25 percent to 50 percent. **In the last five years, Austin has experienced a steady decline in its percent of uncommitted time. From 2009 to 2014, APD's total uncommitted time for patrol officers citywide declined from 33 percent to 19 percent.** In July 2014 a local television station reported that APD's uncommitted time dropped even further to 13 percent of a patrol officer's 10-hour shift. And in 2012, the Police Executive Research Forum (PERF), an independent research organization, found that APD had an overall citywide call-for-service average of 57.2 percent of the total available patrol time per week. This implies that many times and in certain parts of Austin police are mainly answering calls-for-service, often rushing from call to call. Officers have little or no time between calls to engage in the casual and unstructured activities that are at the heart of community and proactive policing to build rapport and engender trust within the community.

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Overview

This document is part of a larger effort of the Greater Austin Crime Commission to assess public safety threats, resources and needs. It draws upon various data from public safety agencies in Central Texas, mainly Travis County and the contiguous counties of Williamson, Burnet, Hays and Bastrop. Austin has the state capital and the greatest number of state employees in Texas, as well as elected state representatives for many months every year. It is home to one of the largest universities in the United States (The University of Texas at Austin with more than 50,000 students) and has one of the highest educated populations in the nation. After state government, high technology and entertainment are the major economic pillars. With important air, highway and rail connections, as well as electronic communications, the city is becoming a major gateway between the United States, Mexico and Central America. It is one of the most rapidly growing large cities in the nation. Austin's current population and the projected numbers raise critical questions about resources, including transportation, water and land. These human, environmental and economic factors must all be addressed to assess public safety needs and resources.

Public safety agencies addressed in this assessment are police, fire and emergency medical services. This document addresses police resources and needs; subsequent documents will focus on fire and emergency medical services. The intent of the document is to provide empirical data on needs and current resources that can assist decision makers in setting funding priorities and directions, particularly at the municipal and county levels.

Core Cultural Patterns

America is unique among the countries of the world in the way its culture formed, its avoidance of strong, centralized government, and its reliance upon the individual and social status *being earned rather than inherited*. Two hundred years ago the world and Europe, especially, were fascinated with the new country, its government elected by the people and governed by the consent of the electorate. Not a few of the "crowned heads" of Europe saw this form of government as a possible future threat to them and their privileged lives.

Being freed from European traditions of royalty, landed gentry, state religion, limited access to education, and static social and economic mobility, our new form of government released human potential. By the 1880s, America was becoming the wealthiest, best educated, most innovative and productive nation in the world. We became a beacon for other societies to follow.

Fundamental Core of Public Safety: Policing

Part of America's fundamental differences, its exceptionalism, is the power provided to the individual and local government rather than the central state. Indeed, the American culture declares that the origin of power in the society is within the individual, then the local community, and only with restricted assignments to government, especially large central government. The Boston Tea Party is an important example of this cultural basic. The protest helped ignite the Revolution and was an act by proper Boston citizens to protest a tax levied by a distant government, a King in England, an alien and indifferent Crown. This challenge to what was seen as an illegitimate government helped set the stage for an

American culture in which government is legal only if it comes from *the consent of the governed*. Nowhere is this more striking than how responses to public safety, crime and disorder are addressed in America. The history and culture of America is one of the local community, the citizens, providing protection to each other from crime, terrorism, fire and disease.

The defining and coding into law of criminal statutes are basic and constitutional responsibilities of each state, and decisions around crime governed by state laws are then made by local groups: the police, the grand jury, the elected public prosecutor, the citizen jury and the judge. The greatest responsibility in America in detecting and dealing with crime lies with the local police. This unique American *exceptionalism* functions best when the police understand and use a particular model of policing, *community policing*.

Community Policing

Community policing is based on these fundamental American principles of local control with individual responsibility, and it requires the police to have both time and training to develop rapport with mutual respect and support with and from members of the community. In this type of policing, officers engage by walking a beat¹ and talking with people on the streets, at parks, and at a variety of community functions, such as church, school competitions, meetings of neighborhood associations, and other social groupings. Residents have a “role in shaping police priorities with respect to the policing of their neighborhoods” (National Research Council, 2004, p. 62). The tasks of maintaining public order and crime-solving become a partnership between the community and the police.

The science and metrics of how one measures community policing and even the effectiveness of policing in preventing crime or promoting social well-being began at the start of the 20th Century and is not complete. We consider what we find to be the best measures available, and we present some of the controversy as we examine how and what Austin police should do.

Police Roles and Measures

There are several measures of community need of police and of officer and departmental productivity. The measures must reflect the reality that police have three broad public responsibilities fundamental to the role of policing in the United States and the culture of American society. These responsibilities are:

- Order maintenance,
- Public service, and
- Crime control.

Order Maintenance

Popular media and much public attention focus upon crime control, but Order Maintenance—such as handling traffic, responding to accidents, regulating speeds, managing large crowds, closing roads under severe weather conditions, and implementing

¹ In its lengthy review of policing practices and policy, the National Research Council panel (2004) noted that walking a beat, or foot patrol, was an “important element” of community policing in its early days, but has since been abandoned as a “core component of more recent community policing programs” (p. 233).

other efforts to ensure that auto and pedestrian traffic can proceed safely and quickly—is a first order of police responsibility. Handling this function is critical to commerce and the safe activity of citizens as they go about their daily lives.

Public Service

These acts are responding to calls for assistance and stopping to render aid. The relative numbers and the ease of mobility of patrol officers make them usually the first responders when aid is required as a result of accidents, sickness, severe weather, and auto mishaps, including flat tires and mechanical problems. Providing public service calls are critical to establishing police patrol as a fundamental resource for members of the community. Patrol officers, by being first responders to accidents, fires and calls for assistance, reflect the history of American policing and the expectations of citizens.

Crime Control

While often perceived by many as *what police do*, we have placed crime control third in presentation to emphasize that it is part of a broader picture. Crime control—rather than media portrayals of the crime fighter—emphasizes that police face the reality that what causes crime are factors beyond the relative power of policing. Weak or overburdened families, poorly functioning schools, neighborhoods with active gangs and other public criminal activities, few jobs (and often only part-time employment), low wages, social class and ethnic conflicts, migratory populations, and weakened religious institutions all present circumstances that may increase the crime rate, and police are left with the role of controlling the rate as much as possible.

Detailing Police Roles and Functions

The most common role of the police is that of an officer in uniform and on patrol. However, for most cities that is only one-third to one-half of the deployment of uniformed (sworn) personnel.² Sworn personnel are those employees of the police department who have undergone rigorous recruitment, selection and training in topics of law, medicine, psychology, social work, mechanics, etc., and handle the ever more complex technology of policing, including a variety of weapons as well as body and car cameras and the basics of securing types of evidence. In most states they are required to be registered with the state, receive regular training, and, in localities like Austin, have additional training requirements. Almost every police officer begins as a patrol officer, and many continue their careers there. Others will use civil service procedures to promote to other roles.

Most departments assign a number of officers to *traffic enforcement* with the responsibility of maintaining safe and continuous flow. Another role is investigating and solving crimes and working with prosecutors. That is typically termed *investigations* and has officers who wear “street clothes”—the detectives—instead of uniforms. Patrol officers are often the first at the scene of a crime, but the subsequent investigation, including interviewing witnesses and persons-of-interest, gathering evidence such as fingerprints and DNA samples, writing reports, and working with the prosecutors and entities, such as the grand jury, are usually functions of the investigations division. This function is very critical to the level of crimes solved (the clearance rate), including murders, assaults and burglaries. In larger cities, law

² The International City/County Management Association (ICMA) uses a “rule of 60” as a guideline in determining the number of patrol officers (i.e., approximately 60 percent of the total number of sworn officers should be assigned to patrol) (McCabe, 2013, p. 10).

enforcement agencies may designate a special section of investigations to focus upon organized crime. Here officers may be assigned to undercover roles to secure intelligence and work in partnerships with state and federal law enforcement. They may adopt clothing and habits so that they appear to be a member or associate of the organized crime entity they are investigating. *Recruitment and training* is another less visible but important function; perhaps five or more percent of all officers will resign or retire in a given year. Recruitment and training is a complex process taking a couple of years from identifying a candidate until the individual is fully trained and can be assigned. In police departments that stress community policing, efforts are made to achieve roughly proportional representation of patrol officers to community ethnic and gender characteristics. This is a challenge if there are historical subdivisions or conflicts in the community with the role of the police, as well as traditional views of who should be a police officer. Substantial numbers of officers are also involved in administrative tasks, including fielding and assigning calls; investigating reports of misconduct by officers; maintaining records of employment, sick days and leave; handling buildings and equipment, including agency vehicles and weapons; and coordinating with other public safety programs and general government. Civilians as well as police officers perform many of these functions, and a sizeable factor in any department is its civilian (non-sworn) employees. Civilians are a less costly category to recruit and employ, and a department needs to do job function analysis to determine if current sworn tasks can be as readily handled by civilians.

In large cities and in state capitals, additional functions are placed on the municipal police. One function is simply maintaining order for large public events, such as the opening session of the legislature, a governor's inauguration, athletic events, and visits by prominent persons. Departments usually have a division, often referred to as *Executive Protection*, that handles these security details. Another is the creation of an entity to hold and share information. The Austin Regional Intelligence Center (ARIC), which serves Travis, Hays and Williamson counties, houses data from local, state and federal law enforcement agencies that collect, analyze and share intelligence information to better "detect, prevent, apprehend, and respond to criminal and terrorist activity."³ Thus while we usually think of the police as the uniformed officer on patrol, that is only a visible portion of the several roles of the police and the larger number of sworn and civilian employees.

Measures of Police Productivity

Resources are finite for every community and at any point in time. Those resources that are directed to public safety, and particularly the police, are often determined by some basic measures that seek to determine the relative need and how well the police respond. A common measure of police productivity is the computed *crime rate*; however, the rate is determined by not only the efforts of police, but also the population and community characteristics. These factors include demographic variables such as education levels, family characteristics, median incomes, the degree to which people know each other and their willingness to help one another, population density, the existence of subcultures, population mobility, married-to-unmarried ratios, and general neighborhood disorder.

³ For more information, visit the ARIC website at <https://arictexas.org/>. For information about statewide and recognized fusion centers, visit the U.S. Department of Homeland Security's website at <http://www.dhs.gov/state-and-major-urban-area-fusion-centers>.

A second common measure of productivity is the *clearance rate*, or the rate at which crimes are solved. The clearance rate is determined by many factors, including the quality of detectives (i.e., experience, training and education) who assume the investigation function of policing. It also depends on the type of crime, the speed with which it is reported, the degree of cooperation from members of the community, the capability of entities such as the crime laboratory and the public prosecutor (i.e., the District and County Attorneys), and the attitudes of the community. Historically, murders have had the highest clearance rate and averaged about 90 percent as late as the 1970s. Rates in most communities, however, are about 60 to 65 percent today. Among the factors suggested as reasons for the decline are a decrease in the willingness of the community to cooperate and report likely offenders; the presence of gangs whose members intimidate and instill in the public a fear of retaliation and retribution; and, for communities in Texas, the proximity of Mexico where perpetrators may flee to escape identification and arrest. Rape has probably among the lowest rates of clearance, as victims may be reluctant to come forward, often must be subjected to a sexual assault medical forensic exam to collect DNA at a hospital or by medical personnel, and then face difficult cross-examination in a court trial. Burglary, assault and other crimes have been materially assisted with improved clearance rates by the existence of advanced technology, but capable staff and crime laboratories are critical requisites to use such technologies.

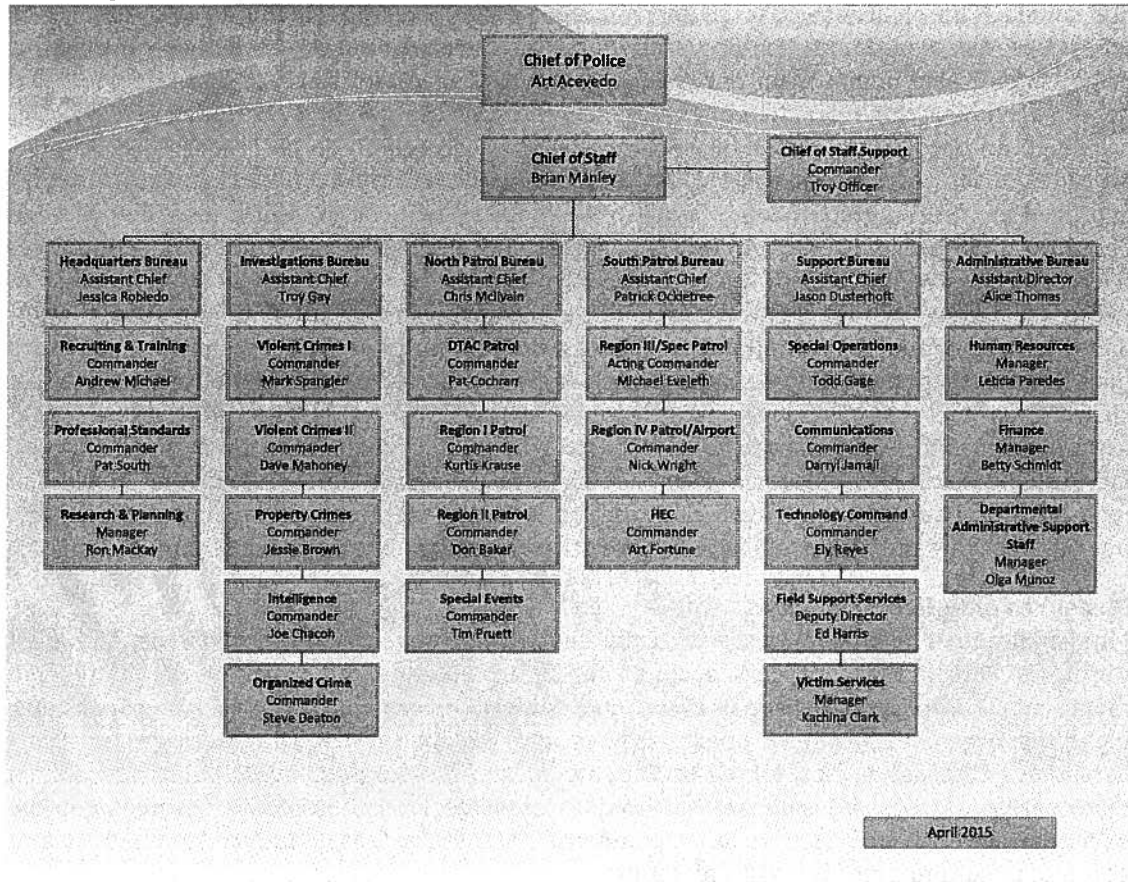
Measures of Police Resources

Municipal police departments are typically divided into seven or more divisions. The most visible is Patrol; these officers account for approximately one-third of the uniformed members. Traffic Enforcement is a second visible division. Less visible is Investigations, including Organized Crime, Property Crimes and Violent Crimes. Other critical functions served are Internal Affairs, which investigate police misconduct; Juvenile Services, which deals with runaways and crimes committed by juveniles; Recruitment and Training; and the Administrative Division that includes command staff, crime labs, evidence rooms, auto and equipment support, and the 911 Call Center.

Austin Police Department: Organizational Structure and Sworn Personnel

Although a thorough examination of APD programs and responsibilities is beyond the scope of this assessment, presented below is a snapshot of the department's organizational structure, divisions, and areas of patrol with corresponding numbers of sworn officers.

APD Organizational Structure (April 2015)



As of February 2015, APD employed 2,292 sworn and civilian personnel. Of these, 1,084 individuals held the rank of “police officer,” with 623 of these officers assigned to area patrol. (See Table 1: Number of Patrol Officers Assigned by Area and Shift.) Other sworn personnel include the Police Chief, six Assistant Police Chiefs, 18 Police Commanders, 67 Lieutenants, 175 Sergeants, and 368 Corporals/Detectives.

Largely congruent with the organization of other city police departments, APD is divided into several divisions, each directed toward accomplishing the agency’s goals and mission—“to keep you, your family and our community safe.”⁴ Because recently conducted departmental studies and audits offer a more in-depth look at these divisions, provided here is a brief outline, along with the number of approved sworn officers for 2014-2015.⁵

⁴ For a complete list of APD’s goals for 2015, see page 111 of the City of Austin’s 2014-2015 budget available at https://assets.austintexas.gov/budget/1415/downloads/fy15_approved_volume_I.pdf.

⁵ See Police Executive Research Forum’s (PERF) “Austin Police Department Patrol Utilization Study: Final Report” (2012), MGT’s 2008 assessment, “Public Safety Police Operations,” and the City of Austin’s 2014-2015 approved budget (pages 113-135) for descriptions of each aforementioned APD program and activity in greater detail.

Investigations Division

- *Centralized Investigations* (focuses on homicide, robbery, sex crimes, property crimes, high-tech crimes, auto theft, burglary and domestic violence) (196 sworn officers approved for 2014-2015)
- *Organized Crime* (investigates gang-related offenses; possession, manufacture, distribution of controlled substances/narcotics, and human trafficking; also provides the Gang Resistance Education and Training [G.R.E.A.T.] program at area elementary and middle schools) (99 sworn officers approved for 2014-2015)

Neighborhood-Based Policing

- *Community Partnerships* (5 sworn officers approved for 2014-2015)
- *Patrol* (901 sworn officers approved for 2014-2015)
- *Patrol Support* (258 sworn officers approved for 2014-2015)
- *Specialized Patrol and Events Planning* (includes Park Police, Lake Patrol and Mounted Patrol) (77 sworn officers approved for 2014-2015)
- *Traffic Enforcement* (130 sworn officers approved for 2014-2015)

Operations Support

- *Air Operations* (9 sworn officers approved for 2014-2015)
- *Communications* (2 sworn officers approved for 2014-2015)
- *Forensics Science Services* (no sworn officers)
- *Special Operations* (includes Bomb Squad) (58 sworn officers approved for 2014-2015)
- *Strategic Support* (no sworn officers)
- *Victim Services* (no sworn officers)

Professional Standards

- *Internal Affairs* (24 sworn officers approved for 2014-2015)
- *Recruiting* (14 sworn officers approved for 2014-2015)
- *Training* (50 sworn officers approved for 2014-2015)

Support Services

- *Departmental Support Services* (includes administration, human resources and fiscal support) (23 sworn officers approved for 2014-2015)

Transfers and Other Requirements (no sworn officers)**Regions and Sectors: Areas of Patrol**

APD's Patrol Division is divided into four regions, and each region is further partitioned into sectors:

Region I:

- Baker (Central West)
- George (Downtown and the Entertainment District)
- Ida (Central East)

Region II:

- Adam (North Central and Northwest)
- Edward (North Central and Northeast)

Region III:

- Charlie (East)
- Henry (Southeast)

Region IV:

- David (South Central and Southwest)
- Frank (Southeast and Southwest)

Based on data provided by APD in February 2015, the following is a breakdown of the number of patrol officers assigned to each area of the city during day, evening and night shifts.⁶

Table 1: Number of Patrol Officers Assigned by Area and Shift

Patrol Area	Day Shift	Evening Shift	Night Shift	Total Patrol Officers per Area
Central East	21	25	20	66
Central West	17	22	17	56
Downtown	19	39	19	77
North Central	19	27	18	64
Northeast	22	35	24	81
Northwest	21	29	23	73
South Central	19	27	20	66
Southeast	22	28	23	73
Southwest	22	28	17	67
Total Patrol Officers per Shift	182	260	181	623

The remaining 461 sworn personnel with the classification of "Police Officer" are assigned to units and divisions throughout the department. (See Table 2: Breakdown of "Police Officer" Rank by Assignment.)⁷

⁶ Only those employees identified by the job title and classification of "Police Officer" and with a work assignment listed as "Patrol" were included in these totals. Higher-ranking personnel also assigned to area patrol, such as "Corporal/Detective," "Sergeant," etc., were excluded.

⁷ These numbers were calculated from data provided by APD, as of February 2015. Only those employees identified by the job title and classification of "Police Officer" were included in these totals. All higher-ranking sworn personnel, such as "Corporal/Detective," "Sergeant," etc., were excluded.

Table 2: Breakdown of "Police Officer" Rank by Assignment

Assignment	Total Police Officers
Air Operations	6
Austin Regional Intelligence Center (ARIC)	8
Aviation	31
Bomb Squad	6
Central East Detectives	2
Centralized Motors	39
Communications (Administration)	1
Continuing Education	9
Crisis Intervention	7
DWI Enforcement	14
Domestic Violence/DVERT	4
Emergency Planning and Response	4
Fugitive Apprehension	16
High Tech/DART	1
Highway Enforcement	14
Highway Response/STAR	8
Intelligence Unit	8
K9	8
K9 Interdiction	9
Lake Patrol	10
Marshals	12
Metro 1 North	9
Metro Central/Narcotics	8

Metro South	9
Mobile Support Unit	11
Mounted Patrol	10
Organized Crime	19
Parks and Recreation	29
Police Tech/DMAV	6
Public Information Office	7
Recruiting	12
Region I: District Representatives	8
Region I: Tactical Teams 2 and 3	15
Region II: District Representatives	8
Risk Management	1
SOAR	3
SWAT	20
South Central District Representatives	9
Southwest District Representatives	8
Special Events	5
Training	27
Vehicle Abatement	2
Watch Commanders/RTCC	10
Vacant/No assignment specified	8
Total	461

Ratio of Officers-Per-Thousand Residents

Police departments and the city governments that provide the basis of the municipal police across America require some metrics to determine how many officers are needed.⁸ The common standard used by many cities – including Austin – is a simple ratio of the number of officers-per-thousand citizens. Such a ratio does not refer to the number of *patrol* officers, but the total number of *all* trained and authorized (sworn) police officers in the given department who are then deployed into the five to seven divisions outlined above. The Federal Bureau of Investigation (FBI) and the Bureau of Justice Statistics, both components of the Department of Justice (DOJ), compile these statistics annually.

For many years, Austin has sought a ratio of two officers-per-thousand citizens, or one officer for every 500 residents. It is convenient to calculate, use and remember. Despite its popularity and ease of comparison across departments and jurisdictions of all sizes, this ratio is a limited descriptive statistic that cannot capture the subtleties of an officer's workload.

Trouble with Ratios: One Size Does Not Fit All

Early in the Police Executive Research Forum's (PERF) "Austin Police Department Patrol Utilization Study" (2012), commissioned by the City of Austin, the authors reiterate what other auditors and researchers have said before about per-capita ratios (Campbell, Brann and Williams, 2003; IACP, 2005; St. Joseph Police Department, 2012; McCabe, 2013; Wilson and Weiss, 2014): They have "little value because they do not provide insight into how officers are used" (p. 13). Uniformed patrol officers, and not plainclothes detectives, are most often the ones rushing from call to call as first responders, yet *all* sworn personnel in the department are included in the ratio calculation. Implicit in the measure are also a number of assumptions: (1) Geographic areas are similar across sectors; (2) Police officer assignments and type of workload do not vary; (3) The types of criminal activity and crime rates are static across the city; and (4) Every resident in the city can—and wants—to be counted in the total population. Even the International Association of Chiefs of Police (IACP), in a past staffing audit of Pittsburgh law enforcement, deemed the per-capita metric "totally inappropriate" (2005, p. 1) and does not recommend it as the sole basis for determining patrol staffing and officer deployment (McCabe, 2013). Although historically applauded for its simplicity in calculation and departmental comparisons, the ratio neither teases out how patrol officers *actually* spend their time, nor does it offer the police department any guidance on how to deploy its officers (Matrix Consulting Group, 2008; St. Joseph Police Department, 2012; City of San Diego, 2013; Wilson and Weiss, 2014).

While the ratio only takes into account population size, it overlooks other key factors, including the individual nature of each patrol area;⁹ "citizen demand for crime control and

⁸ Wilson and Weiss (2014) identified four "typical approaches to staffing allocation:" (1) per capita, (2) minimum staffing, (3) authorized level, and (4) workload- or performance-based. They present the advantages and disadvantages of each, along with a brief how-to guide to conduct a workload-based assessment with performance objectives, in *A Performance-Based Approach to Police Staffing and Allocation*. (See Chapter 3, pages 21-50, for the complete text.)

⁹ As the Austin PERF study (2012) revealed, some crimes and patrol strategies are more specific to certain sectors: The Entertainment District is in George sector, and because it is pedestrian-friendly, with patrons walking to bars, music venues and restaurants, it has "a higher proportion of proactive activities" (p. 23), as officers are more likely to be on foot patrol and, therefore, "more accessible" to downtown visitors (p. 23). Officers in Adam, Baker and Edward sectors, for example, have "high

non-crime services;" number and type of calls-for-service; crime rate in each sector; "cultural conditions;" weather and climate; and "municipal resources" (IACP, 2005, pp. 1-2). For Austin, as in other cities with a transitory population, the per-capita ratio neglects to account for the influx of university students and other individuals who ascend upon the city for its numerous music, film and technological festivals and sporting and other special events (and the crowd control those necessitate) that "keep Austin weird" and on the map as a vibrant cultural and economic destination.

Despite its shortcomings, the officers-per-residents ratio and its comparisons to other cities should not be disregarded. The more appropriate staffing question, according to Campbell, Brann and Williams (2003), is "what will it take for us, in this community, to achieve our public safety goals" (p. 3)? And that may be answered with a complementary measure, the amount of community engagement or uncommitted time patrol officers have on their shift to engage with residents, identify and seek solutions to community problems, and recognize the shared responsibility each has to ensure public protection and empower our communities.

The Superiority of Community Engagement or Uncommitted Time as One Measure of Patrol Productivity and Proactive Policing

A superior measure is the amount of *community engagement* or *uncommitted time* that characterizes those officers assigned to patrol.¹⁰ This is the time that the officer has when not responding to calls-for-service. The activities conducted during an officer's uncommitted time may fall under three general categories: (1) official (i.e., showing up for roll-call or briefings at the start of the daily watch); (2) administrative (i.e., maintaining and servicing the police cruiser, including washing and refueling; writing reports; transporting prisoners; conferring with prosecutors; appearing in court; etc.); and (3) personal (i.e., eating meals and taking restroom or other scheduled breaks; running personal errands; etc.) (Famega, Frank and Mazerolle, 2005).¹¹ Uncommitted or community engagement time

levels of Homeland Security-Directed Patrol activity" and they patrol "critical infrastructure sites" (p. 23).

¹⁰ Although "community engagement time" and "uncommitted time" are used interchangeably and throughout this assessment, the terms are synonymous with "unassigned time" (Famega et al., 2005), "discretionary time" (Campbell et al., 2003; Famega et al., 2005), "proactive (uncommitted patrol) time" (Northwestern University Traffic Institute, April 1993), "unobligated time" (Matrix Consulting Group, 2008), and "downtime" (Famega, 2005). Each of these terms refers to patrol time not spent responding to calls-for-service.

¹¹ No standard appears to exist for naming or assigning activities to specific categories, except for responding to calls-for-service. (That particular activity always is considered "committed" or "obligated" time.) For example, the IACP identified the following "labor" measures in its 2005 Pittsburgh Bureau of Investigation patrol staffing report: (1) operational (i.e., responding to calls-for-service and any self-initiated work); (2) administrative (i.e., attending roll call at the beginning of the shift; maintaining the vehicle; writing reports; attending training; and appearing in court); and (3) uncommitted patrol time (i.e., any time that could not be classified in the other two categories) (p. 4). "Operational" tasks listed here would be considered "committed time" under Austin's definition (see "Uncommitted Time: APD's Methodology" beginning on page 17). The *Police Allocation Manual* (Northwestern University Traffic Institute, April 1993), in its "time-based model" of calculating patrol staffing, parses total patrol time into four categories: (1) reactive (i.e., all calls-for-service); (2) proactive self-initiated (i.e., issuing warnings and citations for traffic violations; helping stranded motorists; "conducting field interrogations" [p. 2-1]; etc.); (3) proactive uncommitted (i.e., "time spent on both moving and stationary patrol" and being available to respond to calls-for-service [p.2-

permits patrol officers to respond quickly to calls-for-service, provide backup for other officers, and ultimately to see and be seen (IACP, 2005). It is the time that the officer has to stop and talk, attend community meetings, and walk or drive a beat—the dozens of activities that characterize community policing. Uncommitted time for patrol is the critical resource that fuels community policing.

Uncommitted Time: APD's Methodology

In recent years, Austin has sought to both maintain the officers-to-citizens ratio *and* track the amount of uncommitted time for patrol. APD provides these formulas when addressing uncommitted time.

Uncommitted time is used to estimate time available to patrol officers for conducting proactive policing. Uncommitted hours are calculated by deducting committed time from total time available. The percent of uncommitted time is then calculated by dividing uncommitted hours by total hours.

$$\begin{array}{l}
 \boxed{\text{total time available}} - \boxed{\text{committed time}} = \boxed{\text{uncommitted time (hours)}} \\
 \boxed{\text{uncommitted time (hours)}} \div \boxed{\text{total time available}} = \boxed{\text{uncommitted time (percent)}}
 \end{array}$$

Committed Time

Committed time is calculated using computer-aided dispatch (CAD) data, or calls-for-service details. When a patrol unit (car) responds to a call (either self-initiated or dispatched), a timestamp identifies when the unit is assigned. Another timestamp identifies when the unit is cleared from the call. The elapsed time from an assigned to a cleared call represents the committed time for that unit. This is totaled for all patrol units for a period of time (usually a full year). It can be examined by sector, region, or citywide.¹²

2]; all activities not considered reactive, self-initiated or administrative); and (4) administrative (i.e., activities that cannot be classified as any of the aforementioned three categories, and would include court appearances, meals, training and vehicle maintenance).

¹² While Austin PD classifies both dispatched calls-for-service and self-initiated calls as "*committed time*," others have categorized them a bit differently. Famega et al. (2005) counted Baltimore patrol officers' supervisor-directed and self-initiated activities (including an officer's personal decision to respond as back-up and assist a fellow officer) as uncommitted or "unassigned" time. As mentioned earlier, the *Police Allocation Manual* (Northwestern University Traffic Institute, April 1993) differentiates among "reactive" (calls-for-service), "proactive self-initiated," and "proactive uncommitted" patrol time categories. (However, like Austin, the IACP [2005] combined calls-for-service with the time needed to "complete work that officers self-initiate" (p. 4), labeling both as "operational labor" and distinct from the total "uncommitted patrol time" [p. 4].)

Based on these differences in coding and classifying activities, if a department groups self-initiated calls with the more "reactive" calls-for-service under the "committed time" rubric, then total committed time will appear greater – with less uncommitted time available for proactive policing. It may be a game of semantics, but at least on paper, the percentage of time devoted to calls-for-service and community policing activities may not be what they seem.

Total Time Available

Total time available starts with the authorized patrol headcount from the staffing allocation spreadsheet maintained by the staffing commander. It includes only officer-level rank. (Ex: Headcount x 2,080 [40 hours/week x 52 weeks/year] = total patrol officer hours in a year)

Next, productive time is calculated and includes time spent responding to calls as well as attending show-ups and debriefings, writing reports, eating meals, and servicing vehicles. Assuming an officer's productive time is 75 percent of his or her total time, the remaining 25 percent is spent on vacation, sick, training, and administrative time (e.g., completing timesheets).¹³ Seventy-five percent is an industry standard for productive time; this has been confirmed using APD activity logs. Productive time = total time available.

The total time available is based on *authorized patrol staff*, which is "best case" scenario where all positions are filled by working officers. Another calculation can be done, based on *estimated actual patrol staff*. The actual headcount also comes from the staffing allocation spreadsheet, but subtracts vacancies, PPOs, and those on long-term leave (i.e., military leave, light-duty or suspensions). The actual headcount estimates the true number of officers working, as opposed to the authorized "best case" headcount. The actual headcount spreadsheet, however, is updated as often as daily, so the actual headcount fluctuates constantly. The authorized headcount, in contrast, remains stable for the full fiscal year.

Summary

Uncommitted time measures how much patrol officer time is available—or uncommitted—for proactive policing. It can be calculated using authorized staffing (i.e., stable headcount) or actual staffing (i.e., fluctuating headcount).

Uncommitted time should be used annually to:

- Compare the department over time and identify upward or downward trends, and
- Take action to increase uncommitted time when indicated.

Community Engagement Time: How Much Is Reasonable and Attainable?

In the mid- to late-1980s, a review of the Los Angeles Police Department (LAPD) recommended its patrol officers allot "at least 40 percent of their time free to patrol neighborhoods" (Rohrlich, 1988), a number the International City/County Management Association (ICMA) also proposes as a goal for uncommitted time.¹⁴

The ICMA suggests 40 percent of a patrol officer's time should be "discretionary" and uncommitted, clarifying that this time is not "downtime or break time," but rather a "reflection of the point at which patrol officer time is saturated by [calls-for-service]"

¹³ Based on Austin PD's calculations, the 2012 PERF report found that Austin patrol officers report to work approximately 75 percent of the time they are scheduled for duty, noting that this figure is "similar to other similar police departments" (p. 27).

¹⁴ As reported in the *Los Angeles Times*, the LAPD study also suggested a "more complex mathematical model" be used to determine the number of patrol officers needed to meet its 40 percent goal and respond to emergencies within seven minutes (Rohrlich, 1988). (In the 2014-15 approved city budget, Austin PD lists one of its goals for 2015 as: "Maintain a 7 minute 30 second response time to emergency and urgent calls" (p. 111).

(McCabe, 2013, p. 14).¹⁵ An earlier report on patrol staffing for the Corvallis, Ore., Police Department noted that law enforcement agencies that “have developed a problem-oriented or community policing program based on effective use of proactive time typically have an average range of 40%-45% uncommitted time, but can reach up to 50%” (Matrix Consulting Group, 2008, p. 53). Uncommitted time dipping “below 35% does not provide time in sufficient unobligated blocks to be useable; whereas above the 45% level is typically not cost-effective given limited fiscal resources” (Matrix Consulting Group, 2008, p. 53).

Best practice experience directs one to those police departments having a minimum of 25 percent uncommitted time for patrol officers. In its Pittsburgh Bureau of Investigation staffing report, the IACP (2005) recommended a goal of 45 to 50 percent uncommitted time for patrol. (However, it is not clear if this percentage is a realistic aspiration for *all* departments, or if it is specific to Pittsburgh’s “policing environment” [p. 5].) In the last five years, Austin has experienced a steady decline in its percent of uncommitted time. **From 2009 to 2014, APD’s total “actual” uncommitted time for patrol officers citywide declined from 33 percent to 19 percent.** By mid-July 2014, a local news channel reported that APD’s uncommitted time dropped even further to only 13 percent of a patrol officer’s 10-hour shift, totaling approximately 93 minutes (or “about eight and a half minutes [of downtime] for every on-duty hour”) (Maxwell, 2014). (See Table 3: Committed and Uncommitted Time for Authorized and Actual Staffing, 2009-2012, and Table 4: Percentage of APD Citywide Uncommitted Time for Authorized and Estimated Actual Staffing, 2009-2014.)

This implies that many times—and in certain parts of Austin—police are mainly answering calls-for-service, often rushing from call to call. Officers have little to no time between calls to engage in the casual and unstructured activities that are at the heart of community and proactive policing—building rapport and engendering trust within the community. (See Table 5: Percentage of APD Citywide Uncommitted Time for Authorized Staffing by Region and Year, 2009-2014.)

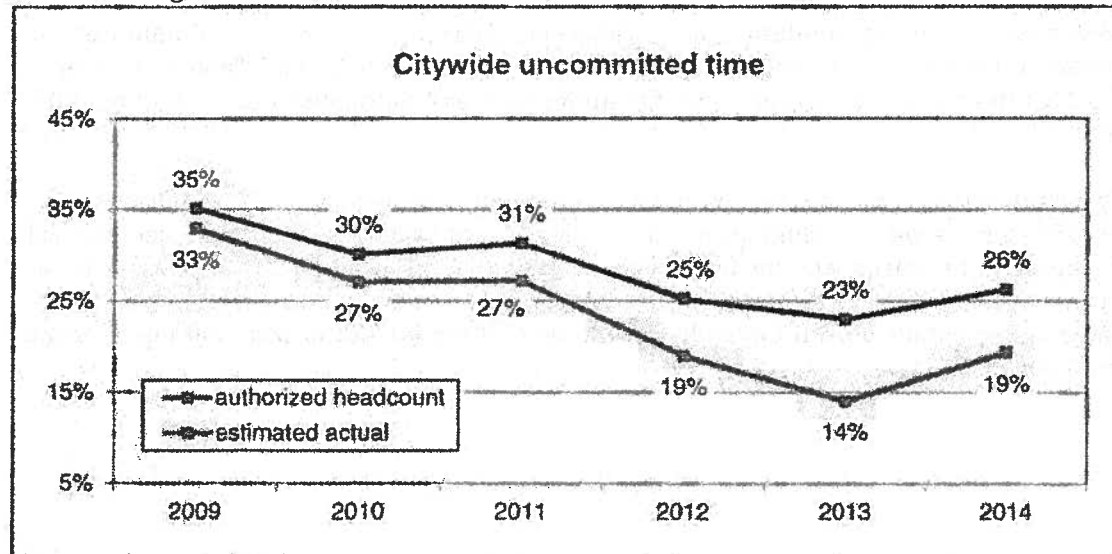
¹⁵ According to McCabe (2013), when patrol officers find themselves hustling from one call to the next, their “focus shifts to a [call-for-service]-based reactionary mode. Once a threshold, or saturation point, is reached, [their...] mindset begins to shift from a proactive approach in which [they look] for ways to deal with crime and quality-of-life conditions in the community to a mindset in which [they] continually [prepare] for the next [call-for-service]. After saturation, officers cease proactive policing and engage in a reactionary style of policing. Uncommitted time is spent waiting for the next call. *The saturation threshold for patrol officers is believed to be 60 percent [italics added]*” (p. 13).

Table 3: Committed and Uncommitted Time for Authorized and Actual Staffing, 2009-2012

Element ▶		Committed hours	Staffing	Total hours	Productive hours	Uncommitted hours	Uncommitted percent
How calculated ▶		patrol officer hours on calls	patrol officer headcount	staffing x 2,080	total hours x 75%	productive - committed hours	uncommitted total hours
2009	authorized	510,192	615	1,279,200	959,400	449,208	35%
	actual (March)	510,192	583	1,212,640	909,480	399,288	33%
2010	authorized	569,937	610	1,268,800	951,600	381,663	30%
	actual (July)	569,937	572	1,189,160	891,870	321,933	27%
2011	authorized	559,836	616	1,281,280	960,960	401,124	31%
	actual (Aug)	559,836	563	1,171,040	878,280	318,444	27%
2012	authorized	630,426	609	1,266,720	950,040	319,614	25%
	actual (Sept)	630,426	538	1,119,040	839,280	208,854	19%

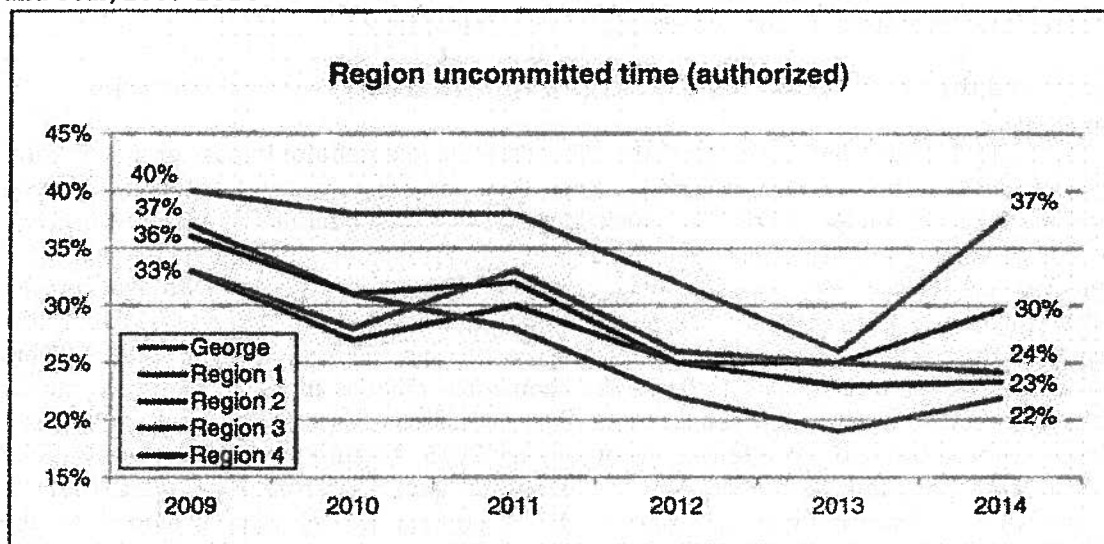
Data provided by Austin Police Department.

Table 4: Percentage of APD Citywide Uncommitted Time for Authorized and Estimated Actual Staffing, 2009-2014



Data and graph provided by Austin Police Department.

Table 5: Percentage of APD Citywide Uncommitted Time for Authorized Staffing by Region and Year, 2009-2014



Data and graph provided by Austin Police Department.

For those seeking a more specific answer—“just give us the magical number of officers needed”—Wilson and Weiss (2014) offer a seemingly non-committal but measured response:

[There] is no single solution to the number of dedicated community policing officers any given agency requires. Rather, the number of community policing officers varies by local preferences and constraints. What is clear, however, is that those engaged in community policing need time to conduct their activities. The way in which that work is assigned – be it to patrol or dedicated community policing unit – determines where staffing resources must be placed (p. 65).

As previously mentioned, the amount of available community engagement or uncommitted time depends on the time of day, sector or area patrolled, and workload (i.e., calls-for-service), among other variables. Calculating in reverse, how much of a patrol officer’s time is exhausted by responding to calls-for-service? In its 2012 Austin police study, PERF acknowledged “no universally accepted standards” (p. 29) exist for the amount of time officers should spend responding to calls on each shift, but introduced – *and then discounted* – an “old rule of thumb” (p. 29) that proposed “one-third of an officer’s time should be spent on calls for service, one-third on self-initiated activity, and one-third on uncommitted patrol time” (p. 29). The community policing orientation “altered that old rule” (p. 29), allowing police departments to substitute strict adherence to fractions for flexibility in how an officer’s time is used.

In 2012, PERF found that Austin PD had an overall citywide call-for-service average of 57.2 percent of the total available patrol time per week. Even compared to other cities, PERF declared this “average time consumed figure” to be “high” (p. 29).¹⁶

Austin and the Challenges of Community Engagement Time: Potential Obstacles Vacancies

The 2012 PERF study stated the obvious: “Vacancies have a definite impact on the amount of uncommitted time available” (p. 31). Regardless of the number of authorized sworn personnel in a city budget, until those positions are filled with qualified and trained officers, the amount of community engagement time devoted to proactive policing will be limited. In some organizations it may be possible to do the same—or even more—with less, but the community’s expectations for an officer to be there *right now* when called overshadow the reality of the vacancy. Plant and Scott (2009) remind us, “The number of police officers available for duty at any time is far fewer than most citizens imagine, and they cannot possibly establish a physical presence in all places at all times in a community” (p. 17). And Austin is operating with even fewer. As of January 2015, Austin PD still had many unfilled positions for the rank of “Police Officer,” extending back to March 2014. (See Table 6: “Police Officer” Vacant Positions, March 2014 - January 2015.) Data provided by the department also revealed 62 police cadet positions posted between August 2012 and January 2015 remain vacant.

Table 6: “Police Officer” Vacant Positions, March 2014 - January 2015

Date of Vacancy	Total Vacant Positions Listed
March 2014	3
April 2014	3
May 2014	2
June 2014	7
July 2014	7
August 2014	2
September 2014	63
October 2014	4
November 2014	7
December 2014	4

¹⁶ Austin’s call-for-service time was compared to that of other cities where PERF had completed staffing reports, including Kansas City, Mo. (call-for-service time was 35% of an officer’s patrol time), Chandler, Ariz. (40%), San Francisco (range of 30% to a little bit more than 50%, depending upon the area), Tallahassee, Fla. (67%, but established a goal of 50%), and Memphis, Tenn. (42%) (PERF, 2012, p. 29).

January 2015	5
Total	107

Data provided by Austin Police Department.

In 2012, the PERF report showed an average uncommitted patrol time of 21.7 percent across all nine sectors, a figure calculated “at full authorized sector strength” (p. 31), and a noticeable decrease from the 31.4 percent registered in a 2011 Austin PD study (p. 31). The authors recommended a total of 706 patrol officers needed to lower the “average time consumed by calls-for-service” from 57 percent to 45, with self-initiated activities hovering at 22 percent, and average uncommitted patrol time “just under” 33 percent (p. vi). As previously mentioned, Austin currently has 623 officers assigned to Patrol.

Michael Morton Act and Impact on Community Engagement Time and Police Response Time

On October 4, 2011, Michael Morton was released from the Texas Department of Criminal Justice after serving almost 25 years for the murder of his wife, a crime for which he was wrongfully convicted. He was officially exonerated two months later in December 2011, and, on May 16, 2013, Governor Rick Perry signed Senate Bill 1611—the Michael Morton Act—into law, effective January 1, 2014.

The law addresses discovery in a criminal case, whereby Texas prosecutors must release all exculpatory evidence that might point to a defendant’s innocence to his or her defense attorney in a criminal case. All evidence must be “inventoried and shared with defense attorneys, even if more expert reports, video or audio files come in after a case has closed” (Maxwell, 2014). Completing all reports and supplements and cataloguing videos and other potential sources of evidence when a suspect has allegedly committed a crime will inevitably require additional time on each call-for-service. This potential increase in committed time naturally implies a decrease in the uncommitted—and a delay in the officer’s return to patrolling his or her beat and engaging with the community.

Last summer, Raul Munguia, assistant chief at the time, “admit[ed the] Morton Act mandates may add to the time an officer needs to thoroughly handle a call...[with lower priority calls] ‘tak[ing] a little bit longer to get to...’” (Maxwell, 2014). It remains to be seen if the data from its first year in statute reveal less time for community policing at current staffing levels, or if compliance and due diligence leave fewer officers on shift to proactively patrol.¹⁷

¹⁷ Travis County District Attorney Rosemary Lehmberg submitted a letter to Austin PD Chief Art Acevedo in April 2014, outlining a laundry list of potential evidence and information to be forwarded to her office in preparation for cases presented to the grand jury. A copy of the letter is available at <https://lintvkxan.files.wordpress.com/2014/07/lehmberg-memo-to-law-enforcement.pdf>. It is also worth noting that the Legislative Budget Board (LBB) prepared and submitted a fiscal note regarding SB 1611 to the House Committee on Judiciary & Civil Jurisprudence in April 2013, and anticipated “[n]o significant fiscal implication to units of local government.” (Retrieved March 2, 2015, from <http://www.capitol.state.tx.us/tlodocs/83R/fiscalnotes/pdf/SB01611E.pdf#navpanes=0>)

Comparison Cities

Austin often compares itself to cities of similar size and to those having mostly higher education levels and white-collar employment bases. Some are of comparable size, or in the state and region, or with comparable resident and occupational characteristics. Kansas City, Mo., Atlanta and Dallas are those with the highest number of officers-per-thousand residents, according to 2013 Uniform Crime Report police employee data (FBI, 2014). (See Table 7: Comparison Cities and Officers-Per-Thousand Residents.)

Beyond Texas

Atlanta has a history of being one of America's most dangerous cities, although the crime rate has declined substantially since 2001. During those years, Atlanta increased the number of officers by 20 percent and accomplished several important reorganizations. A now safer city also played a role in Atlanta's economic resurgence, though it remains a far more dangerous city than Austin.

Albuquerque, N.M., Denver, Kansas City, Mo., and Minneapolis are compared to Austin because of the large base of middle-class neighborhoods and white-collar employment rather than manufacturing, agriculture or mining as dominant occupations. Albuquerque has a large homeless population, and in the last three years it has received prominent attention because of reports of police misuse of force, as well as roving youth beating the homeless. Denver, Kansas City and Minneapolis are viewed as quiet, safe cities. However, Austin is more populous than these four comparisons and is growing much more rapidly.

Seattle is another city with a comparable ratio of officers-to-citizens to that of Austin. Seattle has a crime rate higher than the Washington state level and higher than the national level. Homelessness and chronic drug and alcohol use are cited as among the city's crime problems.

Phoenix and San Jose, Calif., are comparison cities that are quite different from Austin and, therefore, may not yield much helpful information. Phoenix is Arizona's largest city, and, like Austin, is one of the nation's fastest growing cities, is the state's capital, and has a large state-supported university. Agriculture is more of a dominant part of its economy, but most jobs are middle class and white collar. Hispanics and Anglos are nearly equal in population proportion, with African-Americans comprising about six percent, and other races/ethnicities smaller in proportion.

San Jose is in the shadow of the more visible San Francisco and the even more affluent communities to its south, such as Palo Alto. Yet it has substantial affluence and is the headquarters of many high tech firms and refers to itself as the capital of "Silicon Valley." The slowing California economy and the severe drought have curtailed most cities in that state, San Jose included, of hiring public employees, including police.

Within Texas

El Paso has a lower ratio of officers-to-residents and touts itself as one of the safest cities of its size in the nation. That condition is often compared to the rate of crime and violence in its Mexican neighboring city, Ciudad Juárez, that was until recent years the most dangerous city in the world, recording in 2010 more than 3,000 murders, approaching 10 a day! Contrast that to Austin, which might be more populous than Juárez, but with an annual rate of murders around 30 persons. (It is difficult to secure precise numbers in Mexico. In 2005,

Juárez had a population of about 1.5 million, but since then, reports have aired of entire neighborhoods vacated as people moved out from the endemic violence.) El Paso, with approximately 700,000 people, has in recent years tallied 11 to 12 murders a year, but in 2014 registered 20. El Paso is unique among all of these comparison cities in that it sits on an international border and has very large military installations nearby at Fort Bliss, White Sands and Alamogordo. Thus the city can call on federal resources far beyond the relative degree that exists among the other comparison cities. Indeed, history advises that both Fort Bliss and the Interstate 10 highway system were partially placed on or near this border because of periods in history when Mexico became unstable and would permit a rapid American response if needed.

Dallas, Fort Worth and Houston are the most relevant State of Texas comparisons, but Dallas and Houston have higher ratios of officers-to-citizens than does Austin. Fort Worth, at least according to 2012 data from the FBI's Uniform Crime Reporting Program, recorded a similar ratio to Austin (FBI, 2013).

Specific Reference Cities

For Austin to retain its traditions of prosperity and openness, community policing is a requisite. Recent failure of the City to implement the recommendations of the past three years for the number of police needed (which was made more complex considering the time to recruit, train and deploy new officers) puts Austin in a precarious position on public safety. The data below are available from the FBI's "Crime in the United States" reports and are from calendar year 2013 (unless otherwise noted).

Table 7: Comparison Cities and Officers-Per-Thousand Residents

Comparison City	Population in 2013	Total Officers*	Officers-Per-Thousand Residents
Albuquerque, NM**	553,684 (2012)	999 (2012)	1.80
Atlanta, GA	451,020	1,855	4.11
Dallas, TX	1,255,015	3,474	2.77
Denver, CO	648,981	1,395	2.15
El Paso, TX	679,700	1,069	1.57
Fort Worth, TX**	770,101 (2012)	1,536 (2012)	1.99
Houston, TX**	2,177,273 (2012)	5,318 (2012)	2.44
Kansas City, MO	465,514	1,367	2.94
Minneapolis, MN	396,206	844	2.13

Phoenix, AZ	1,502,139	2,890	1.92
San Jose, CA	992,143	1,077	1.09
Seattle, WA	642,814	1,294	2.01
Austin, TX	859,180	1,675	1.95
	832,901 (2012)	1,628 (2012)	1.95 (2012)

*This represents the total number of all sworn officers in the department, and not simply those assigned to patrol duties.

**2013 Uniform Crime Report police employee data were not available for Albuquerque, Fort Worth and Houston. Data from the 2012 report for these cities are provided for comparison purposes.

Policing Strategies

Part of the question of how many police officers are needed is answered by the type of policing the city chooses to do. Austin does “community policing” and seeks to build trust between citizens and officers to assist in preventing and solving crimes. Such a “policing style” requires uncommitted time so that officers are not moving mainly between calls all day. Uncommitted time permits officers to meet people in the community and secure their involvement. Most experts recommend a minimum of 25 percent uncommitted time, and levels as high as 50 percent are seen in cities such as Seattle. Uncommitted time should be coupled with data that identify “hot spots” and police leadership that directs time toward such problem areas. By way of comparison, Austin has less than 15 percent uncommitted time and, in some neighborhoods, the level is at 5 percent.

Compounding Factors in Police Ratios and Community Engagement Time

There are two central factors in deciding the number of police in a community: (1) the *demand* for police time and (2) the *cost* of policing. Policing is very expensive, and when an officer is hired, a department is usually making a multi-year commitment to include support during retirement. Failure to have adequate policing can create neighborhood characteristics (i.e., disorder) and crime patterns that frighten people, are detrimental to property values and prosperity, and can take years to turn around.

These are some of the major compounding factors:

- How rapidly is a city growing?
- What are the ages of population groups in the city?
- Are people buying or renting homes?
- Do newcomers and citizens share common attitudes or come from divergent perspectives?
- Are newcomers from nearby states, more distant areas, or foreign countries?
- Do international linkages exist?

Austin has all of these compounding factors. It is estimated that 110 people move to Austin each day! Using the ratio of two officers-per-thousand residents, the City must then add two new officers every nine days.

Austin is one of the fastest growing large cities in the nation. It bounced in the rankings from the 14th most populous city to 11th, increasing by 12 percent from 2010 to 2013 to an estimated total of 885,400 residents in July 2013 (Cohen, 2015). The relationship between the growth in recent years, its projected growth, and the requirement of police officers is suggested by these data released in January 2015 from the City of Austin's Department of Planning.

Table 8: Austin Area Population Histories and Forecasts

Year	City of Austin Total Area Population	Annualized Growth Rate
2006	718,912	2.64
2007	735,088	2.25
2008	750,525	2.10
2009	774,037	3.13
2010*	790,390	2.11
2011	812,025	2.74
2012	832,326	2.50
2013	855,215	2.75
2014	878,733	2.75
2015	900,701	2.50
2016	920,967	2.25
2017	941,689	2.25

*This number represents the city's resident population on April 1, 2010, per the 2010 Census (Cohen, 2015).

By 2017, Austin will have a population of 941,689 if these projections are accurate. This represents an increase in the population of approximately 13 percent from 2012. APD's authorized sworn police staffing (for *all* ranks) is 1,787, rising to 1,846 on April 1, 2015. As of January 1, 2015, the department had 116 vacancies for sworn personnel (2 lieutenant, 2 sergeant, 5 corporal/detective and 107 police officer positions). The ratio of two officers-per-thousand residents discussed above is viewed as a minimum level. **The current ratio of authorized positions (1,846) per thousand residents (900,701 in 2015) is 2.05.** The department loses approximately five sworn officers a month due to attrition, retirement, suspensions, etc. Currently APD has the capacity to recruit and train 60 new officers each year.

Dynamic Factors in the Austin Population

Austin has a large transient population of students and visitors. The University of Texas at Austin brings annually about 10,000 new undergraduate and graduate students (for a total enrollment of more than 50,000 students), and others come to Concordia University Texas (approximately 2,500 students), St. Edward's University (approximately 5,000 students), Huston-Tillotson University (approximately 1,000 students), and Austin Community College District (multiple campuses and centers serving more than 60,000 students). Students from Texas A&M University and Texas State University often visit Austin, especially on the weekends and when special events are occurring. Special events have become an important activity in Austin and a challenge for law enforcement; overtime is used to assemble police into the downtown area and other geographical venues to accommodate these events. Young populations and the availability of alcohol and other drugs produce crowd-handling challenges, which are exacerbated when bars close in the Entertainment District and dump from 20,000 to 60,000 people into the streets at 2 a.m.

Government visitors are common to the state's capital, as are persons employed by corporations with headquarters or regional offices for Texas in Austin. Prominent government and business individuals increase the need for executive protection. While some of that function is handled by the FBI and the U.S. Secret Service, coordination with these offices requires resources, and there are many others that are not protected by federal offices.

There are increasingly two very different demographic groups in Austin: young singles and affluent retired couples. Rising real estate prices drive blue-collar and other middle-class working groups to the suburbs, thus increasing road congestion. This commuting population places requirements for more officers assigned to traffic enforcement.

These residential trends are made more complex by the increasing number of undocumented persons living in and near Austin. The City's demographer says these numbers are not known or cannot be estimated. Informally two years ago the Austin Police estimated that between 50,000 and 100,000 undocumented persons lived in Austin, with the greatest concentration in neighborhoods along U.S. Highway 183 and Interstate 35, in southeast Austin, and in southeast Travis County in towns such as Del Valle. While school officials contend that they are not permitted to ask or perhaps report the country of origin of their students or the students' parents, the fact that maybe 80 percent of the parents of the students at Lanier High School in the Rundberg area neither have high school degrees nor speak English permits an estimate of that population as non-documented.

Given fears of being deported from this country and prior experience with police in Mexico, Guatemala, Honduras and/or El Salvador, the use of community policing will require more relative numbers of officers and great skills in building trust with these neighborhoods and residents. School success difficulties are compounded by low incomes of many families and the cultural traditions expecting older children, especially teenagers, to have jobs and contribute earnings to household budgets. That cultural pattern results in jobs during school hours, leaving less time for homework and more school absences.

Non-citizen populations can become areas where criminal activities may develop. Non-citizens may be less likely to work closely with the police and thus provide "cover" for organized crime. For Austin - only 234 miles from Nuevo Laredo - drug and human

trafficking are prominent threats to public safety. Interstate 35 is thought to be North America's largest venue of illegal guns and drugs, human trafficking, and "dirty" money headed both north and south. There is little doubt this affects the level and characteristics of crime in Austin and Central Texas. If the Mexican border remains porous and Mexico riven by crime, then the threat of terrorism is increased.

Long Range Factors

Data that will need to be acquired to assess both policing need and community resources to fund services are:

- Population growth for the last five years and future projections, including some demographic features;
- Median income and employment estimates for the City's various populations; and
- Some assessment of the actuarial conditions of the City's retirement systems.

Austin's Economic Foundations

For many years the economic foundations of Austin were state government and The University of Texas at Austin. By the late 1960s, high-tech firms began to be attracted to Austin, including IBM, Texas Instruments and Motorola, and spinoffs out of or associated with UT included MCC, Sematech, National Instruments, TRACOR and Dell. By 2000 software developers grew in size, generating the *dot.com boom* and subsequent bust. But because of the talent in the area, international companies continue to locate operations here, most notably Samsung, Apple and AMD. In most of these cases, wages are substantial with benefits. The educational complex expanded greatly with The University of Texas at Austin student body reaching more than 50,000, and Texas State University changing from a teacher preparation college of perhaps 5,000 students to a university with more than 34,000. The Austin Community College has more than 60,000 students, and St. Edward's University, Southwestern University in Georgetown, Concordia University Texas, and Texas A&M University all have some level of footprint in Austin. These educational systems are reflective of the strong but demanding job market in Austin.

Coinciding with the 1960s high-tech feature was the development of a music industry marked by the Armadillo World Headquarters and KLRU's Austin City Limits. This has expanded into frequent annual festivals and special events and the development of an entertainment district in the downtown area. The jobs that are created in these fields provide low wages and limited benefits as compared to those in state government, public universities and the high-tech sector. This may result in a larger population with lower median wages and more Emergency Medical Services (EMS) and hospital calls that are not covered by insurance or payments from the users. As a caveat to the security of state employment, some recent research conducted by Dr. Noel Landuyt at The University of Texas at Austin indicates certain sectors of state employees also do not have health insurance. These are the lowest paid employees. This may reflect stagnant wages in the state workforce because of substantial inflation in housing costs, utilities, food and transportation.

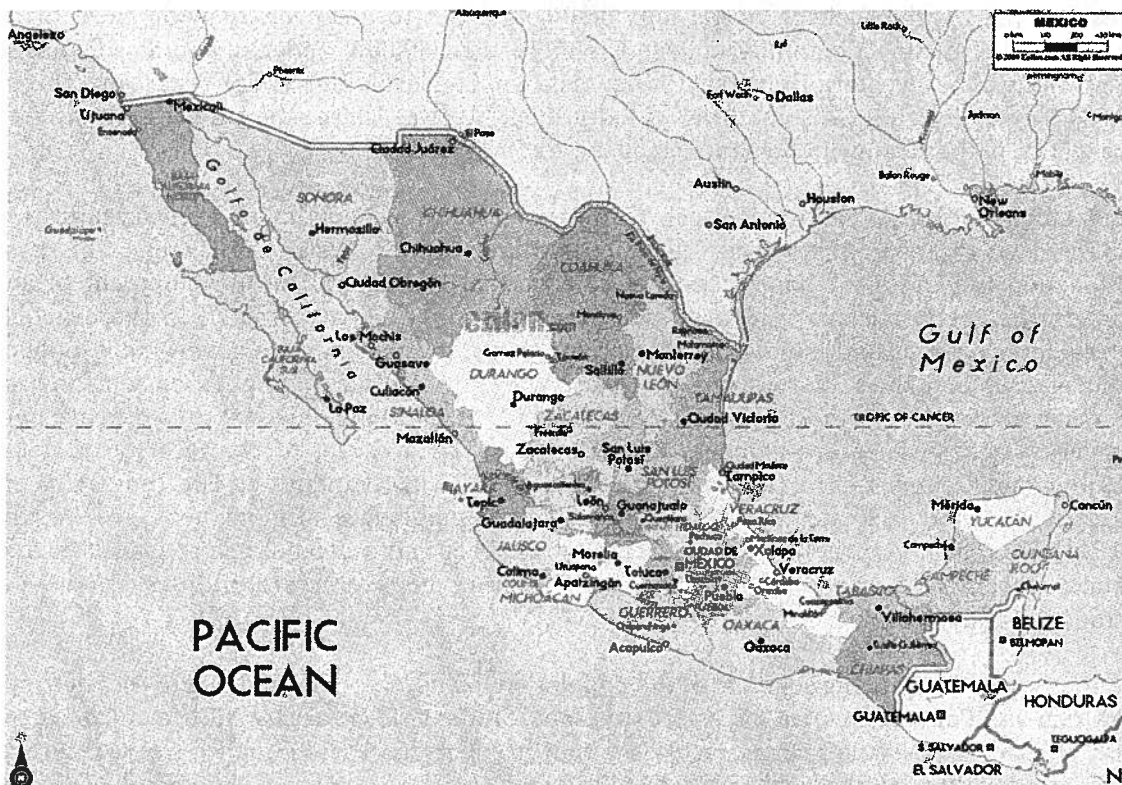
Another rapidly growing segment of the population includes persons moving to Austin from Mexico and Central America for various reasons. Students from these countries who are in Dr. Michael Lauderdale's classes at UT say they are here to develop English skills, secure a strong education, and have alternatives to returning to Mexico. Most of those students from countries south of Mexico – from Guatemala, Honduras and El Salvador – see little prospect

of returning to homes there and instead plan to relocate to the United States, Mexico, Brazil, or perhaps Peru or Colombia. Those from Mexico plan to live and work in both countries and hope that Mexico shifts from the violence of the last decade.

In contrast to college students, a much larger population from these countries to our south are those individuals who come with few resources and seek unskilled and semi-skilled jobs in Austin in construction, yard maintenance, and hotel and restaurant services. They are candid about missing their home cultures, but also about witnessing the poverty and violence there. However, like those in the entertainment industry, wages are low (often in cash) and the jobs have no benefits such as health care, disability income and care, and retirement. The numbers are considerable, and among the school-aged population in certain neighborhoods such as Rundberg, 80 percent of the residents are from these countries to our south. This has been a trend for several years, and only with the accelerating large number of children crossing into cities such as McAllen since October 2013 has it begun to receive needed attention.

Increasing Pressures from the South

Parts of Mexico are a failed state and prominently, for Texas, it is the State of Tamaulipas that is south of the Laredo-to-Brownsville section of the border. Tamaulipas runs along the Gulf Coast to the next Mexican state to the south, Veracruz, which is a potentially hugely wealthy state from the prospects of oil – but a corrupt union and the national company, PEMEX, prevent much exploration and production. Below is a map that portrays how much of a troubled part of Mexico lies adjacent to Texas.



The ready route for people from Central America is through the southernmost state of Mexico, Chiapas, then along the Gulf Coast through Veracruz and Tamaulipas, and then entering Texas. It is shorter than to California, has fewer deserts and mountains, and has much better highway and rail connections to the north. Key entering points are in the Rio Grande Valley at McAllen and Brownsville with reduced numbers as one moves west to Laredo. San Antonio, Houston and Austin are the first stopping points north of the overwhelmed Texas towns along the border.

In the 1980s, the Mexican government maintained tight controls on its southern border and controlled illegal immigration into Mexico. Communicable diseases were one concern as well as the potential cost of education, job training, and health care of millions of rural immigrants from Central America. That control appears to have collapsed during the last few years. The reasons are unknown, but that is why we have seen 52,000 children arrive in Texas since October 2013. Testimony at Chairman Michael McCaul's hearings of the U.S. House Committee on Homeland Security in early July 2014 showed that we can anticipate 150,000 from Guatemala, Honduras and El Salvador in the coming 12 months.¹⁸ (The number increased after the July 2014 hearings from 52,000 to 57,000.) The children, if they are not returned, will have to head away from Mexico, and the federal government is actively busing and flying those women and children to points north in Texas (such as Lackland Air Force Base in San Antonio), west to Arizona and California, and onto other states. It is believed under current law, since those apprehended are minors and not from Mexico, they must be processed through a court hearing. Federal agencies are flying or busing these persons, mainly children and some women, to other areas of the United States, including nearby San Antonio and to other states, including Arizona and California, to hold until a court hearing and determination is made. As an example, 1,300 in early 2014 were transferred to Fort Sill next to Lawton, Okla., where the U.S. Department of Health and Human Services (HHS) has custody and refused to permit a member of the U.S. House of Representatives from Oklahoma to enter the facility.

The flow of children has displaced U.S. Customs and Border Protection (commonly referred to as Border Patrol) from a federal police force with the responsibility to control the border to one holding and moving women and children. There are also adult males in this flow, and that includes members of gangs from Mexico, Honduras, Guatemala and El Salvador. That policing responsibility that belongs in the federal domain now falls much more heavily on local and state police.

Years ago there should have been efforts to address poverty and corruption in Central America and Mexico. The lands are rich in natural resources, and the people are hard-working. People should not have to abandon homes, family and culture to flee poverty, violence and gangs. Yet they are coming by car, by freight train and on foot. This is not Syria, Afghanistan, Iraq, Nigeria or Egypt with displaced populations and refugee camps – but it begins only 1,200 miles south of McAllen.

¹⁸ Chairman McCaul's opening remarks at the July 2014 field hearing in McAllen are available at <http://homeland.house.gov/sites/homeland.house.gov/files/documents/07-03-14-McCaul-Open.pdf>. Additional testimony on the "surge of unaccompanied minors" can be viewed at <http://homeland.house.gov/hearing/field-hearing-crisis-texas-border-surge-unaccompanied-minors>

Texas is now inheriting the lack of leadership and thinking of many years past. Efforts to enhance the dialogue with representatives of these countries with consulate offices in Austin and Houston are urgently needed. Many of those children are arriving in Austin. More will come. Some alone. Some with adults. Some with other siblings. The public schools, the hospitals, the police, EMS, the parks and the streets see the impact. Major Texas cities and the state have no choice but to act with or without federal due diligence. If the federal administration continues to fail to control the border—and that is a constitutional burden and responsibility of the federal government—then we will see hundreds of thousands of adults and children coming into Texas.

Police face challenges of human trafficking, illegal drugs and the violence that cartels use to move contraband in and through Austin. The worst fears are being manifest on the Mexican border, and this will lead to a direct impact on the streets and in the hospitals and schools of Austin. There are two ways this will occur and make very critical the numbers, selection and training of Austin police officers and, to some extent, EMS.

One is that the 60,000+ children who have crossed the border into Texas since October 2013 cannot stay in towns such as McAllen. Those jurisdictions' resources are overwhelmed. These are unaccompanied minors, and they should be turned over to Protective Services in each state for placement in foster care. States, not the federal government, have the trained personnel to arrange and supervise foster care. It is not a perfect system—Texas has fewer than 33,000 foster care placements—and the deaths of two children in foster care in Williamson County over the July 4th weekend in 2014 illustrate the problems in selecting and supervising those who provide foster care. How then can Texas expand foster care to handle some significant fraction of the 52,000, in addition to portions of the thousands more children coming in the next 12 months?

These children will require housing, education, clothing, medical care and transportation. How will Texas be able to secure and pay for these resources? Caregivers receive foster care payments per child per day of approximately 23 dollars, and there are probably 10 more dollars per child per day to pay for other associated costs. If 52,000 children remain in Texas and have comparable costs to Texas children, the annual budget (\$626,000,000) will be half of what the state spends on the Texas Department of Public Safety. If some of these children are simply on the streets in cities like ours, how will public safety agencies like APD cope?

The second is the presence of thousands of children who have been told to find and are seeking out Border Patrol officers. This removes those federal officers from the critical function of thwarting drug and human trafficking mainly led by cartels. Law enforcement officials in McAllen and Laredo report that the immigrant children will climb fences to enter Border Patrol offices to surrender to those officers. This means that state and municipal law enforcement will face a larger burden not only in border towns such as McAllen and Laredo, but also in cities like Austin. Human trafficking and illegal drug activity will increase on the streets of Austin as a result of this refugee disaster overwhelming Border Patrol officers and limiting their role in interdicting this criminal activity.

Criminal Networks

A July 2014 Texas Department of Public Safety (DPS) summary of arrests and recoveries associated with the border between Texas and Mexico from El Paso to Brownsville shows

the impact of Mexican cartels in Texas. Gang activity is evident as well as narcotics trafficking, but most striking is the number of apprehensions of persons entering Texas without documentation. Those apprehensions, and especially those of children, serve to neutralize much of the federal capability of the Border Patrol to provide secure borders and place a heavier burden on the DPS on the highways, and municipal police and county sheriffs within Texas communities as one moves north of the immediate border.

Most of this activity does not remain in border cities such as El Paso, Laredo or McAllen, but flows northward through Texas and then to the states north and east of Texas, where two thirds of the U.S. population reside. Interstate 35 is one major artery of this flow. Other large routes are the highways from the Rio Grande Valley to Houston and then Interstate 10 to the east. The flow from countries to our south (Mexico, Guatemala, Honduras, El Salvador, Costa Rica, Nicaragua, etc.) through Texas then serves medium and large narcotics and human trafficking hubs in Dallas, Oklahoma City, Tulsa, Okla., Kansas City, Mo., St. Louis, Mo., Chicago, Atlanta, New Orleans, the Carolinas, and Louisville, Ky., and then farther to the northeast in Philadelphia, New York City, Boston, and into central and eastern Canada. As an example, the epidemics of Mexican/brown tar heroin use in Chicago, Detroit, and eastern cities such as New York – with the high profile overdose and death of the actor Philip Seymour Hoffman – are likely from this heroin flow along both Interstate 35 and Interstate 10 to the northeast.

This is not simply contraband being moved along Interstate 35. More than three years ago at a City of Austin Public Safety Commission briefing, Drug Enforcement Administration (DEA) Agent Gregory Thrash warned that Austin was serving as a “secondary command and control post” for those organizations that assemble the contraband in Mexico and move it to buyers in American cities. Some portion of the contraband is taken from the larger flow and then distributed to local networks and gangs to sell in Central Texas communities. Some is diverted along both east and west U.S. Highway 183 to reach smaller communities such as Marble Falls, Lampasas, Hamilton, Wichita Falls, Elgin, Giddings, College Station, etc. All through this movement, people must be hired to drive the vehicles and protect loads and cash from theft, overnight lodging secured, contacts and tracking maintained, etc. Those are the functions of command and control. Estimates are that the annual flow is worth between 18 and 50 billion dollars. More recent testimony in February 2015 by DEA Agent Thrash advised the City of Austin’s Public Safety Commission that known “controllers” of Mexican cartels lived in Austin to monitor and control the various contraband activities of these drug trafficking organizations.

The 2014 DPS summary provides some illustration of what the Austin Police Department and other municipal and county law enforcement officers encounter in highway and street stops, as well as the impact on some city neighborhoods in Austin and Central Texas. The Austin Police Department is the largest public safety resource in Central Texas, and this emphasizes how important our deliberations are relative to budget and staffing configurations for the department.

Resources for Police Force Strength Analysis and Assessment

International Association of Chiefs of Police (IACP)

Founded in 1893, the International Association of Chiefs of Police has been serving the needs of the law enforcement community through research and disseminating innovations and foundation programs for the police profession.

For more information about IACP, its working groups, and resources and publications, visit <http://www.theiacp.org/>

International City/County Management Association (ICMA)

Founded in 1914, the International City/County Management Association is a non-profit organization of local government managers and administrators. With almost 9,000 members, the association strives to "create excellence in local governance by developing and fostering professional management to build better communities" in the U.S. and worldwide. Its work addresses all aspects of local government, including parks and recreation, public works and public safety.

For more information about ICMA and its programs, publications and initiatives, visit <http://icma.org/en/icma/home>

National Institute of Justice (NIJ) and Harvard's Kennedy School of Government - Executive Session on Policing and Public Safety

A collaborative effort between the National Institute of Justice and Harvard's Kennedy School of Government, the Executive Sessions assemble academics and researchers, police chiefs and commissioners, and legal scholars to discuss the present state of policing. Members then produce papers on a variety of topics, including the professionalism of the police, police and community relations, and procedural justice. The second session convened in 2008; the first session met in the 1980s and helped shape the community policing concept.

- Main website: <http://nij.gov/topics/law-enforcement/administration/executive-sessions/pages/welcome.aspx>
- Papers from the First Executive Session: <http://nij.gov/topics/law-enforcement/administration/executive-sessions/pages/past.aspx#papers>
- Papers from the Second Executive Session: <http://nij.gov/topics/law-enforcement/administration/executive-sessions/Pages/papers.aspx>

Police Executive Research Forum (PERF)

The Police Executive Research Forum is an independent research organization that focuses on critical issues in policing. Since its founding in 1976, PERF has identified best practices on fundamental issues such as reducing police use of force; developing community policing and problem-oriented policing; using technologies to deliver police services to the community; and evaluating crime reduction strategies.

For more information about PERF and its publications and research, visit: <http://www.policeforum.org/>

RAND Center on Quality Policing (CQP)

Established in 2006, the Center on Quality Policing provides guidance to local law enforcement agencies on incorporating best practices, measuring agency performance, using and managing the latest technology, and helping identify and maintain a "qualified work force." The CQP is a part of RAND's Safety and Justice Program. Additional information about the CQP is available at http://www.rand.org/ise/centers/quality_policing/

- **Cost of Crime Calculator:** <http://www.rand.org/jie/centers/quality-policing/cost-of-crime.html>
By entering police department size and a change in the number of personnel, this online calculator shows how an increase or decrease in the number of officers can potentially affect the cost of crime in the community. See related article, *Hidden in Plain Sight: What Cost-of-Crime Research Can Tell Us About Investing in Police* by Paul Heaton, available at http://www.rand.org/content/dam/rand/pubs/occasional_papers/2010/RAND_OP279.pdf

Vera Institute of Justice

Founded in 1961, the Vera Institute is an independent, non-partisan, non-profit organization devoted to research, technical assistance and demonstration projects on a variety of justice-related topics, including juvenile justice, immigration, courts, sentencing and corrections, and policing. Staff work with "law enforcement and government agencies to reduce crime and promote efficient policing while improving public safety."

- Main website: <http://www.vera.org/>
- Policing: <http://www.vera.org/topics/policing>

References

Campbell, J. H., Brann, J., & Williams, D. (2003). *Officer-per-thousand formulas & other policing myths: A leadership model for better police resource management*. Portland, OR: Campbell DeLong Resources. Retrieved February 12, 2015, from <http://www.cdri.com/library/Officer1000FullVer.pdf>

City of Austin. (2014, November 13). *2014/15 Austin, Texas, approved budget: Volume one*. Retrieved February 28, 2015, from https://assets.austintexas.gov/budget/14-15/downloads/fy15_approved_volume_I.pdf

City of Austin. (2015, January). *Austin, Travis County, and metropolitan Austin population history and forecast - 1940-2040*. Retrieved July 26, 2015, from http://www.austintexas.gov/sites/default/files/files/Planning/Demographics/austin_forecast_2015_annual_pub.pdf

City of San Diego. (2013, September). *Performance audit of the police patrol operations*. San Diego, CA: Author. Retrieved January 3, 2015, from www.sandiego.gov/auditor/reports/fy14_pdf/audit/14-006_Patrol_Operations.pdf

Cohen, D. (2015, March). *Population trends in incorporated places: 2000-2013*. Washington, DC: U.S. Census Bureau. Retrieved March 5, 2015, from <http://www.census.gov/content/dam/Census/library/publications/2015/demo/p25-1142.pdf>

Famega, C. N. (2005). Variation in officer downtime: A review of the research. *Policing: An International Journal of Police Strategies & Management*, 28(3), 388-414.

Famega, C. N., Frank, J., & Mazerolle, L. (2005, December). Managing police patrol time: The role of supervisor directives. *Justice Quarterly*, 22(4), 540-559.

Federal Bureau of Investigation. (2013). *Crime in the United States 2012: Police employee data*. Washington, DC: U.S. Department of Justice. Retrieved July 26, 2015, from https://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2012/crime-in-the-u.s.-2012/tables/78tabledatadecpdf/table_78_full_time_law_enforcement_employees_by_state_by_city_2012.xls/view

Federal Bureau of Investigation. (2014). *Crime in the United States 2013: Police employee data*. Washington, DC: U.S. Department of Justice. Retrieved July 26, 2015, from https://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2013/crime-in-the-u.s.-2013/tables/table-78/table_78_full_time_law_enforcement_employees_by_state_by_city_2013.xls/view

Glendale Police Department. (2010). *2010 staffing study*. Glendale, AZ: Author. Retrieved January 8, 2015, from <http://www.glendaleaz.com/police/documents/StaffingStudyFinal2010.pdf>

International Association of Chiefs of Police. (2005, May). *Pittsburgh bureau of police: Patrol staffing and deployment requirements (Phase 2 report)*. Retrieved January 3, 2015, from www.briem.com/ica_olddocs/patrol_deployment_staffing.pdf

MGT of America, Inc. (2008, June). *Public safety police operations*. Retrieved March 2, 2015, from <https://www.austintexas.gov/sites/default/files/files/Auditor/au06118a.pdf>

Matrix Consulting Group. (2008, December 5). *Report for the staffing allocation study for the police department: City of Corvallis, Oregon*. Palo Alto, CA: Author. Retrieved February 10, 2015, from <https://www.corvallisoregon.gov/modules/showdocument.aspx?documentid=2837>

Maxwell, R. (2014, July 3). *APD: Morton law could slow some police call times* [News broadcast]. Austin, TX: KXAN. Retrieved January 4, 2015, from <http://kxan.com/2014/07/03/apd-morton-law-could-slow-some-police-call-times/>

McCabe, J. (2013). *An analysis of police department staffing: How many officers do you really need? A review of 62 police agencies analyzed by the ICMA/CPSM*. Washington, DC: ICMA Center for Public Safety Management. Retrieved February 15, 2015, from icma.org/Documents/Document/Document/305747.

National Research Council. (2004). *Fairness and effectiveness in policing: The evidence*. Committee to Review Research on Police Policy and Practices. W. Skogan & K. Frydl (Eds.) Washington, DC: The National Academies Press. Retrieved February 1, 2015, from <http://www.nap.edu/catalog/10419.html>

Northwestern University Traffic Institute. (1993, April). *Police allocation manual: Determination of the number and allocation of personnel for patrol services for state police departments*. Washington, DC: National Highway Traffic Safety Administration. Retrieved February 28, 2015, from <http://www.nhtsa.gov/people/injury/enforce/pub/stallocm.pdf>

Northwestern University Traffic Institute. (1993, October). *Police allocation manual user's guide: Determination of the number and allocation of personnel for patrol and traffic services for municipal law enforcement agencies (version M3.0)*. Washington, DC: National Highway Traffic Safety Administration. Retrieved February 28, 2015, from <https://www.ncjrs.gov/pdffiles1/Digitization/154019NCJRS.pdf>

Plant, J. B. & Scott, M. S. (2009, August). *Effective policing and crime prevention: A problem-oriented guide for mayors, city managers, and county executives*. Washington, DC: Office of Community Oriented Policing Services. Retrieved February 15, 2015, from <http://www.popcenter.org/library/reading/pdfs/mayorsguide.pdf>

Police Executive Research Forum (PERF). (2012, July). *Austin police department patrol utilization study: Final report*. Washington, DC: Author. Retrieved February 15, 2015, from http://www.austintexas.gov/sites/default/files/files/Police/PERF_Final_Report_-_Austin.pdf

Rohrlich, T. (1988, March 7). Police have too little time to patrol, study finds. *Los Angeles Times*. Retrieved December 11, 2014, from http://articles.latimes.com/1988-03-07/local/me-487_1_patrol-officers/2

Saint Joseph Police Department. (2012). *Staffing report*. Saint Joseph, MO: Author. Retrieved January 15, 2015, from <https://www.stjoepd.info/pdf/Staffing%20Report.pdf>

Wilson, J. and Weiss, A. (2014). *A performance-based approach to police staffing and allocation*. Washington, DC: Office of Community Oriented Policing Services. Retrieved March 13, 2015, from <http://ric-zai-inc.com/Publications/cops-p247-pub.pdf>

